Vol. II

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1936

No. 539

THE OHIO BELL TELEPHONE COMPANY,
APPELLANT,

vs.

THE PUBLIC UTILITIES COMMISSION OF OHIO

APPEAL FROM THE SUPREME COURT OF THE STATE OF OHIO

FILED NOVEMBER 20, 1936.

SUPREME COURT OF THE UNITED STATES

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VOL. II.

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[fol. 1024] BEFORE PUBLIC UTILITIES COMMISSION OF OHIO

Advanced Utility Rate Proceeding No. 241

In re Proposed Increased Rates of The Ohio Bell Telephone Company for Telephone Service Furnished in its Sedalia, Ohio, Exchange Area, Filed to Become Effective July 1, 1926.

1926

May 29. Schedule designated P. U. C. O. No. 4, applicable to Sedalia, Ohio, Exchange Area, filed to become effective July 1, 1926.

June 29. Order issued by Commission upon its own initiative providing for the suspension of said schedule for a period of 120 days from May 29, 1926. Copies of such order served on parties in interest.

June 30. Certificate of Publication of newspaper notice filed.

July 23. Application filed by respondent company asking the Commission to determine amount of bond to be filed. Bond fixed in the sum of $100.00. Surety bond in the said sum of $100.00 filed by respondent company.

Aug. 3. Entry made by Commission approving said bond. Copies of such entry served on parties in interest.

NOTE: This proceeding consolidated with Formal Case No. 3307 (the so-called "state wide" case). For further docket entries, see Formal Docket No. 3307.

[fol. 1025] BEFORE PUBLIC UTILITIES COMMISSION OF OHIO

Advanced Utility Rate Proceeding No. 242

In re Proposed Increased Rates of The Ohio Bell Telephone Company for Telephone Service Furnished in its Washington Court House, Ohio, Exchange Area, Filed to Become Effective July 1, 1926.

1926

May 29. Schedule identified as P. U. C. O. No. 4, applicable to Washington Court House, Ohio, Exchange Area, filed to become effective July 1, 1926.

June 29. Order issued by Commission upon its own initiative providing for the suspension of said schedule for a

period of 120 days from May 29, 1926. Copies of such order served on parties in interest.

June 30. Certificates of Publication of newspaper notice filed.

July 23. Application filed by respondent company asking Commission to determine amount of bond to be filed. Bond fixed in the sum of $4,200.00. Surety bond in the sum of $4,200.00 filed by respondent company.

Aug. 3. Entry made by Commission approving said bond. Copies of such entry served on parties in interest.

NOTE: This proceeding consolidated with Formal Case No. 3307 (the so-called "state wide" case). For further docket entries, see Formal Docket No. 3307.

[fol. 1026] BEFORE PUBLIC UTILITIES COMMISSION OF OHIO

Advanced Utility Rate Proceeding No. 243

In re Proposed Increased Rates of The Ohio Bell Telephone Company for Telephone Service Furnished in its Westerville, Ohio, Exchange Area, Filed to Become Effective July 1, 1926.

1926

May 29. Schedule designated P. U. C. O. No. 7, applicable to Westerville, Ohio, Exchange Area, filed to become effective July 1, 1926.

June 29. Order issued by Commission upon its own initiative providing for the suspension of said schedule for a period of 120 days from May 29, 1926. Copies of such order served on parties in interest.

June 30. Protest against said schedule filed by H. H. Clark, Westerville, Ohio.

June 30. Complaint against said schedule filed by B. W. Havens, et al., Galena, Ohio.

June 30. Complaint against said schedule filed by W. B. Johnston, et al., Westerville, Ohio.

July 7. Certificate of Publication of newspaper notice filed.

July 23. Application filed by respondent company asking Commission to determine amount of bond to be filed. Bond fixed in the sum of $800.00. Surety bond in said sum of $800.00 filed by respondent company.

Aug. 3. Entry made by Commission approving said bond. Copies of such entry served on parties in interest.

NOTE: This proceeding consolidated with Formal Case No. 3307 (the so-called "state wide" case). For further docket entries, see Formal Docket No. 3307.

[fol. 1027] BEFORE PUBLIC UTILITIES COMMISSION OF OHIO

Advanced Utility Rate Proceeding No. 252

In re Proposed Increased Rates of The Ohio Bell Telephone Company for Telephone Service Furnished in its Canton, Ohio, Exchange Area, Filed to Become Effective November 1, 1926.

1926

Sept. 30. Schedule identified as P. U. C. O. No. 6, applicable to Canton, Ohio, Exchange Area, filed to become effective November 1, 1926.

Oct. 18. Protest against said schedule filed by James E. Kinnison, Solicitor of the City of Canton, Ohio.

Oct. 19. Communication received from the Clerk of the City Council, Canton, Ohio, setting forth resolution of said council protesting against the increased rates of The Ohio Bell Telephone Company.

Oct. 27. Order issued by Commission providing for the suspension of said schedule for a period of 120 days from September 30, 1926. Copies of such order served on parties in interest.

Nov. 30. Application filed by respondent company asking Commission to determine amount of bond to be filed herein. Bond fixed in the sum of $38,500.00. Surety bond, in the said sum of $38,500.00, filed by respondent company.

Dec. 7. Entry made by Commission approving said bond. Copies of such entry served on parties in interest.

NOTE: This proceeding consolidated with Formal Case No. 3307 (the so-called "state wide" case). For further docket entries, see Formal Docket No. 3307.

The Public Utilities Commission of Ohio, E. J. Hopple, Chairman; Frank W. Geiger, Charles F. Schaber, Commissioners.

Dated at Columbus, Ohio, this twenty second day of January, 1935. C. H. Knisley, Secretary. (Seal.)

[fol. 1028] BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

ORDER OF OCTOBER 14, 1924, INSTITUTING COMPANY WIDE CASE NO. 3307, ETC.

3307—In the matter of the investigation and inquiry of the Public Utilities Commission of Ohio, upon its own motion, for the determination (a) of the fair value of the property of The Ohio Bell Telephone Company, toll and exchange, (b) of the just and reasonable rates and (c) of reasonable rules and regulations for services furnished by said company to its patrons throughout the state of Ohio.

The commission having heretofore, by formal resolution, determined to enter upon a state-wide investigation of the valuation, rates, charges and services of the various telephone companies operating within the State of Ohio, and it appearing that there are now pending before the commission separate rate cases of The Ohio Bell Telephone Company involving not only the exchange rates in the respective communities and known and designated and numbered on the dockets of this commission as follows:

In re Application for determination of rates for unified service in Lancaster, Ohio, exchange area, No. 2367-S 1;

In re Application for determination of rates for unified service in Massillon, Ohio, exchange area, No. 2367-S 12;

In re Application for determination of rates for unified service in Dayton, Ohio, exchange area, No. 2367-S 17;

[fol. 1029] In re Application for determination of rates for unified service in Canton, Ohio, exchange area, No. 2367-S 18;

In re Application for determination of rates for unified service in Akron, Cuyahoga Falls and Tallmadge exchange areas, No. 2367-S 22;

In re Application for determination of rates for unified service in Barberton, Ohio, exchange area, No. 2367-S 23;

In re Application for determination of rates for unified service in Canal Winchester, Ohio, exchange area, No. 2367-S 26;

In re Application for determination of rates for unified service in Youngstown, Ohio, exchange area, No. 2367-S 27;

In re Application for determination of rates for unified service in Toledo, Ohio, exchange area, No. 2367-S 28;

In re Complaint of the Village of Hubbard v. The Ohio Bell Telephone Company, No. 3181;

In re Rates of The Ohio Bell Telephone Company for service in Columbus, Ohio, exchange area, Nos. 1368 and 1900;

In re Service connection charges of The Ohio Bell Telephone Company, No. 1728;

In re Proposed increased rates for service at Lancaster, A. U. R. P. No. 40;

In re Proposed increased rates for service at Ripley, A. U. R. P. No. 42;

In re Proposed increased rates for service at Massillon, A. U. R. P. No. 132;

[fol. 1030] In re Proposed increased rates for service at Youngstown, A. U. R. P. No. 135;

In re Proposed increased rates for service at Marietta, A. U. R. P. No. 136;

In re Proposed increased rates for service at Middletown, A. U. R. P. No. 137;

In re Proposed increased rates for service at Akron and Barberton, A. U. R. P. No. 138;

In re Proposed increased rates for service at Dayton, A. U. R. P. No. 141;

In re Proposed increased rates for service at Cleveland, A. U. R. P. No. 142;

In re Proposed increased rates for service at Piqua, A. U. R. P. No. 143;

In re Proposed increased rates for service at Steubenville, A. U. R. P. No. 146;

In re Proposed increased rates for service at Niles, A. U. R. P. No. 147;

In re Proposed increased rates for service at Girard, A. U. R. P. No. 149;

In re Proposed increased rates for service at Toledo, A. U. R. P. No. 139;

In re Proposed increased rates for service at Toronto, A. U. R. — No. 156;

In re Proposed increased rates for service at East Palestine, A. U. R. P. No. 157;

In re Proposed increased rates for service at South Charleston, A. U. R. P. No. 159;

In re Proposed increased rates for service at Alton, A. U. R. P. No. 160;

[fol. 1031] In re Proposed increased rates for service at Gahanna A. U. R. P. No. 161;

In re Proposed increased rates for service at Worthington, A. U. R. P. No. 162;

In re Proposed increased rates for service at New Albany, A. U. R. P. No. 163;

In re Proposed increased rates for service at Dublin, A. U. R. P. No. 164;

In re Proposed increased rates for service at Galloway, A. U. R. P. No. 165;

In re Proposed increased rates for service at Harrisburg, A. U. R. P. No. 166;

In re Proposed increased rates for service at Hilliards, A. U. R. P. No. 167;

In re Proposed increased rates for service at Lockbourne, A. U. R. P. No. 168;

In re Proposed increased rates for service at Reynoldsburg, A. U. R. P. No. 169;

In re Proposed increased rates for service at Groveport, A. U. R. P. No. 170;

In re Proposed increased rates for service at Pickerington, A. U. R. P. No. 171; and

In re Proposed increased rates for service at South Solon, A. U. R. P. No. 172,

but also the toll rates of said company for the entire state (In re Proposed increased rates of The Ohio Bell Telephone Company for toll service, A. U. R. P. No. 124).

And it further appearing that the determination of any so-called "local rate" does not solve the same question arising in other local subdivisions, and that, in all probability, [fol. 1032] the interest of the public will be best served, that just and reasonable rates be fixed and determined for the service of said company, not only in said communities, but also in all of the other communities served by said company in the state, and in the state as a whole, to the end that the telephone users in all the said communities shall have the lowest possible rates, exchange and toll, consistent with good service and a fair return to the company.

And it appearing further that in all of said cases now pending before the commission the important issues are identical; such that a single, consolidated case would determine the same for all of the rates, charges and services of said company in the state, at a minimum expenditure of time and money on the part of both the communities interested in said rates and the commission, it is, hereby

Ordered, That the Public Utilities Commission of Ohio, upon its own motion, and without complaint or other pleadings, inaugurate and enter upon a hearing and investigation of all the rates, joint rates, tolls, charges, rentals, classifications and practices, service and property valuation (toll and exchange), of said The Ohio Bell Telephone Company in the state of Ohio, and, to this end, it is further

Ordered, That all pending cases, as hereinabove enumerated, involving the above questions, wherein The Ohio Bell Telephone Company is a party, be and they are hereby consolidated in this proceeding, and the evidence heretofore introduced in said cases shall be considered and made a part of the record in this case; reserving the right to the parties interested in those cases wherein evidence has al- [fol. 1033] ready been offered by any of the parties interested, upon the issues therein involved, to offer such other and further competent evidence as to them shall seem fit. It is further

Ordered, That, on or before December first, nineteen hundred and twenty-four, said The Ohio Bell Telephone Company furnish to this commission and file in this cause, as a part of the evidence therein, a complete inventory of all of its property located in the state of Ohio and used and useful and to be used and useful, in the furnishing of telephone service therein, both toll and exchange, classified according to the classification adopted and prescribed by this commission and the Interstate Commerce Commission for telephone companies, and that, upon the filing of such inventory, this consolidated case proceed to a hearing for the determination of the fair value of said property and of the just and reasonable rates for the service thereby to be furnished by said company to its patrons throughout the state of Ohio.

The Public Utilities Commission of Ohio, Charles C. Marshall, Chairman; George T. Poor, Frank B. Maullar, Commissioners.

Dated at Columbus, Ohio, this fourteenth day of October, 1924.

A true copy. J. B. Dugan, Acting Secretary. (Seal.)

[fols. 1034-1063] Commissions Tentative Finding January 10, 1931, omitted. See Exhibit "A", printed side fol. 363, ante.

[fols. 1064-1068] Commission's Order of January 10, 1931, Finding Tentative Value omitted. See Exhibit "B", printed side fol. 390, ante.

[fols. 1069-1072] Protest and Notice of Protest of Valuation on Behalf of The Ohio Bell Telephone Company, omitted. See Exhibit "C", printed side fol. 394, ante.

[fols. 1073-1145] Before Public Utilities Commission of Ohio

No. 3307

Opinion and Finding, January 16, 1934, omitted. See Exhibit "D," printed side fol. 399, ante.

[fols. 1146-1151] Commission's Order of January 16, 1934, omitted. See Exhibit "E", printed side fol. 498, ante.

[fols. 1152-1176] Protest and Application and Petition of The Ohio Bell Telephone Company for a Rehearing of This Cause, February 6, 1934, omitted. See Exhibit "F", printed side fol. 505, ante.

[fol. 1177] Application and Request of The Ohio Bell Telephone Company, February 17, 1934, omitted. See Exhibit "G", printed side fol. 526, ante.

[fols. 1178-1181] Commission's Order of March 1, 1934, omitted. See Exhibit "H", printed side fol. 528, ante.

[fols. 1182-1212] Protest and Application and Petition of The Ohio Bell Telephone Company for a Rehearing of This Cause, March 9, 1934, omitted. See Exhibit "I", printed side fol. 533, ante.

[fol. 1213] BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

No. 3307

In the Matter of the Investigation and Inquiry by The Public Utilities Commission of Ohio, Upon Its Own Motion for the Determination (a) of the Fair Value of the Property of The Ohio Bell Telephone Company, Toll and Exchange, (b) of the Just and Reasonable Rates, and (c) of Reasonable Rules and Regulations for Service Furnished by Said Company to Its Patrons Throughout the State of Ohio

ORDER OF MARCH 9, 1934

This day, this matter came on for further consideration upon the pleading denominated Protest and Application and Petition of The Ohio Bell Telephone Company, asking for the reasons and upon the grounds set forth therein, a rehearing with respect to each and all of the matters and things decided and determined by the findings and orders of the Commission entered in this cause on January 16, 1934, and on March 1, 1934.

The Commission, being fully advised in the premises, finds that sufficient cause has not been made to appear in said application and petition for such rehearing. It is, therefore,

Ordered, That the said Protest and Application and Petition of The Ohio Bell Telephone Company asking for the reasons and upon the grounds set forth therein, a rehearing with respect to each and all of the matters and things decided and determined by the findings and orders of this Commission entered in this cause on January 16, 1934, and on March 1, 1934, be, and hereby the same is, denied.

To which order of the Commission denying its said application and petition for rehearing, said The Ohio Bell Telephone Company then excepted, here now excepts and its exceptions here are noted of record.

The Public Utilities Commission of Ohio, Frank W. Geiger, Charles F. Schaber, Commissioners.

Dated at Columbus, Ohio, this 9th day of March, 1934.

[fols. 1214-1217] Commission's Order of July 5, 1934, omitted. See Exhibit "J", printed side fol. 562, ante.

[fol. 1218] Commission's Order of July 9, 1934, omitted. See Exhibit "K", printed side fol. 566, ante.

[fols. 1219-1226] Application and Request of the Ohio Bell Telephone Company With Respect to the Commission's Order of July 5, 1934, omitted. See Exhibit "L", printed side fol. 568, ante.

[fols. 1227-1230] Application and Request of the Ohio Bell Telephone Company With Respect to the Commission's Order of July 9, 1934, omitted. See Exhibit "M", printed side fol. 574, ante.

[fols. 1231-1285] Verified Return of The Ohio Bell Telephone Company to the Order to Show Cause Contained in the Commission's Findings and Order of July 5, 1934, omitted. See Exhibit "N", printed side fol. 577, ante.

[fols. 1286-1339] Verified Return of The Ohio Bell Telephone Company to the Order to Show Cause Contained in the Commission's Findings and Order of July 9, 1934, omitted. See Exhibit "O", printed side fol. 589, ante.

[fols. 1340-1382] Protest and Application and Petition of The Ohio Bell Telephone Company for a Rehearing of This Cause omitted. See Exhibit "P", printed side fol. 600, ante.

[fols. 1383-1388] Application for Rehearing, August 29, 1934, omitted. See Exhibit "Q", printed side fol. 641, ante.

[fols. 1389-1394] Commission's Order of September 6, 1934, omitted. See Exhibit "R", printed side page 644, ante.

[fols. 1395-1401] Application and Request of the Ohio Bell Telephone Company with Respect to the Commission's Order of September 6, 1934, omitted. See Exhibit "S", printed side fol. 652, ante.

[fol. 1402] BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

No. 3307

In the Matter of the Investigation and Inquiry by The Public Utilities Commission of Ohio upon Its Own Motion for the Determination (a) of the Fair Value of the Property of The Ohio Bell Telephone Company, Toll and Exchange, (b) of the Just and Reasonable Rates, and (c) of Reasonable Rules and Regulations for Services Furnished by Said Company to Its Patrons Throughout the State of Ohio

ORDER OF SEPTEMBER 27, 1934

This day this proceeding came on for further consideration upon the three requests, filed September 25, 1934, by the respondent, The Ohio Bell Telephone Company, for the following relief, to-wit:

1. To disclose to respondent and afford it an opportunity to examine and analyze the alleged "instructions" issued by the Commission to the said E. W. Wood and referred to in his said report, responsive to which instructions, said report and its accompanying exhibits were prepared and made, and to afford the respondent an opportunity (a) to examine, analyze and challenge the propriety and materiality of said instructions, (b) to examine and cross-examine the said E. W. Wood in respect thereof and in respect of the statements and data contained in said report and exhibits, and (c) to explain and rebut said report and exhibits and any testimony in respect thereof. Respondent requests that the Commission hold an open hearing at which

the information herein requested shall be disclosed to respondent and at which respondent shall have the opportunity to examine, cross-examine, analyze, explain and rebut as herein requested.

2. To permit respondent, in accordance with the requests heretofore made by it and hereby renewed, to introduce separate evidence of the fair value of its property and as to its revenues, expenses and net income for each of the separate cases wherein respondent is collecting rates pursuant to bond.

3. To disclose to respondent and afford it an opportunity to examine, analyze, explain and rebut the information and methods of application thereof used by this Commission in arriving at its findings and order of January 16, 1934, consisting of alleged material and labor cost prices and trends obtained from various sources without respondent's knowledge, and not offered or introduced in evidence in any open hearing or made a part of the record in this case, and to which information and the methods of its application respondent has never had access or been informed in respect thereof, as follows:

(a) Cost prices for several years furnished by unidentified manufacturers of telephone equipment;

(b) The trend of land values allegedly ascertained from an examination of tax valuations in certain of the large [fol. 1403] cities of Ohio, the names of which cities were undisclosed;

(c) Building cost trends taken from the Engineering News Record;

(d) Labor cost trends from the same publication;

(e) Other labor and material cost trends obtained from various undisclosed sources.

The Commission, coming first to consider the requests enumerated as Numbers "2" and "3", finds that said requests are the same requests which have already, repeatedly, been made and over-ruled herein, and does hereby finds that the same should be, and hereby they, and each of them, are over-ruled.

To which action of the Commission in over-ruling said requests, respondent, The Ohio Bell Telephone Company, then excepted, here now excepts and its exceptions here are noted of record.

And the Commission, coming now to consider the request enumerated as No. "1", finds that there were no special instructions issued to accountant E. W. Wood other than those given in open hearing to prepare a statement as to the refunders which should be ordered upon different bases, to which no objections were made by counsel for the respondent, and that his report (made a part of the record herein by order of September 6, 1934), is similar to his testimony on the subject which was given at the session of the hearing held herein upon August first, 1934, and upon which he was then examined and cross-examined by the respondent and other parties in interest.

The Commission, therefore, further finds that said request No. 1 should be, and hereby the same is over-ruled.

To which action of the Commission in over-ruling said request, respondent, The Ohio Bell Telephone Company, then excepted, here now excepts and its exceptions here are noted of record.

The Public Utilities Commission of Ohio, Frank W. Geiger, Charles F. Schaber, Commissioners.

Dated at Columbus, Ohio, this 27th day of September, 1934.

[fols. 1404-1459] Protest and Application and Petition of The Ohio Bell Telephone Company for a Rehearing of This Cause, omitted. See Exhibit "T", printed side fol. 657, ante.

[fol. 1460] BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

No. 3307

In the Matter of the Investigation and Inquiry by The Public Utilities Commission of Ohio, Upon Its Own Motion for the Determination (a) of the Fair Value of the Property of The Ohio Bell Telephone Company, Toll and Exchange, (b) of the Just and Reasonable Rates, and (c) of Reasonable Rules and Regulations for Service Furnished by Said Company to Its Patrons Throughout the State of Ohio

ORDER OF OCTOBER 19, 1934

This day this matter came on for further consideration upon the protest, application and petition of The Ohio Bell

Telephone Company filed October 1, 1934, asking, for the reasons and upon the grounds set forth therein, a rehearing with respect to the matters and things decided and determined by the findings and orders of the Commission entered in this cause January 16th, March 1st, July 5th, July 9th, and September 6th, 1934.

The Commission, being fully advised in the premises, finds that sufficient cause has not been made to appear for such rehearing. It is, therefore,

Ordered, That said application of The Ohio Bell Telephone Company, filed October 1st, 1934, be, and hereby the same is, denied.

To which order of the Commission denying its said application, said The Ohio Bell Telephone Company then excepted, here now excepts, and its exceptions here are noted of record.

The Public Utilities Commission of Ohio, —— ——, Chairman; Frank W. Geiger, Charles F. Schaber, Commissioners.

Dated at Columbus, Ohio, this 19 day of October, 1934.

[fol. 1461] Before The Public Utilities Commission of Ohio

(Filed 12-20-32)

No. 3307

In the Matter of The Investigation and Inquiry of the Public Utilities Commission of Ohio, Upon Its Own Motion for the Determination (a) of the Fair Value of the Property of The Ohio Bell Telephone Company, Toll and Exchange, (b) of the Just and Reasonable Rates and (c) of Reasonable Rules and Regulations for Services Furnished by Said Company to Its Patrons Throughout the State of Ohio

Stipulation with Reference to Chicago Evidence

It is hereby stipulated and agreed:

First. There is attached to this stipulation an abstract of testimony in the case of Illinois Bell Telephone Company,

Plaintiff v. G. Gale Gilbert, et al., Defendants, in the District Court of the United States for the Northern District of Illinois, Eastern Division, In Equity No. 3746 (hereinafter refered to as the Illinois Case) consisting of seven (7) volumes, together with four (4) additional volumes as follows:

1. Index to plaintiff's evidence and exhibits.
2. Index to defendants' evidence and exhibits.
3. Additional objections to exhibits offered by defendants.
4. Defendants' answers to plaintiff's additional objections to exhibits offered by defendant, filed December 10, 1932, and to plaintiff's objections made in the record.

It is stipulated that the abstract of testimony of the following witnesses, who testified orally in said cause, as the same is set out in said volumes referred to, shall be and is hereby introduced and admitted in evidence in this cause with the same force and effect as though each of said witnesses had testified in this cause, viz:

Donald R. Belcher, Carroll C. Bickelhaupt, Edgar S. Bloom, Edward E. Brown, James Campbell Burton, Charles P. Cooper (whose testimony was stipulated), Allen B. Crunden, G. W. Cummings, William H. Egan, Bancroft Gherardi, Richard H. Gregory, A. D. Grote, John S. Hagberg, W. M. Hammond, Charles A. Heiss, Allen G. Hoyt, Arthur Hunter, Frank B. Jewett, George B. McCann, Arthur W. Page, R. C. Rainwater, Jonathan G. Sharp, W. F. Sloan (rebuttal testimony), Lambert N. Whitney, Charles R. Whitworth, F. M. Williams, J. G. Wrays.

It is also stipulated that the abstract of testimony of the following witnesses who testified by deposition as the same is set out in said volumes referred to shall be and is hereby introduced and admitted in evidence in this cause with the same force and effect as though each of said witnesses had testified in this cause, viz:

Seymour L. Andrew, Harold D. Arnold, James F. Behan, Otto Bernard Blackwell, Hugh Blair-Smith, Edgar S. Bloom, Robert W. Burgess, George A. Campbell, Edwin F. Carter, [fol. 1462] Harry H. Carter, Daniel E. Collins, George E. Folk, Bancroft Gherardi, Frank B. Jewett, Theodore G. Miller, Lyman F. Morehouse, Cajetan Morsack, John Ed-

ward Otterson, Arthur W. Page, James J. Pilliod, John G. Roberts, Pierre W. Saxton, Clyde Uhrig.

The testimony of said witnesses and the exhibits hereafter described, which are likewise made a part of this record by stipulation, shall, however, be considered upon four issues involved in this cause and four only, viz:

1. The earnings of the Western Electric and the reasonableness of such earnings.
2. The cost to the American Telephone and Telegraph Company of rendering services under the license contract and the reasonable amount which should be allocated in that respect to The Ohio Bell Telephone Company.
3. The separation and apportionment of the property, revenues and expenses of The Ohio Bell Telephone Company as between its intrastate and interstate property, revenues and expenses.
4. Rate of return.

Second. It is further stipulated and agreed that the following exhibits which were introduced in evidence in the Illinois case shall be admitted and introduced in evidence in this cause:

"A" Exhibits which were introduced by the Plaintiff in said cause:

66 to 124, inclusive, 130 to 182 inclusive, 193 to 195 inclusive, 197 to 202 inclusive, 205 to 207 inclusive, 212 to 219 inclusive, 222 to 233 inclusive, 235 to 242 inclusive, 253 to 262 inclusive, 266, 270, 271.

"D" Exhibits which were introduced by the defendants in said cause:

7, 8, 19 to 91, inclusive, 93 to 117 inclusive, 122, 124, 125, 128, 135 to 137 inclusive.

"X" Exhibits which were introduced by the defendants in said cause:

13 to 15 inclusive, 16 to 50-A, inclusive, 55, 66 to 75 inclusive, 76, 77, 79 to 83-B including 83-A as corrected by defendants, 88 to 97 inclusive, 99, 100, 104, 105, 109 to 121 inclusive, 141, 148, 192 to 198 inclusive, 200 to 202 inclusive,

205 to 208 inclusive, 211, 217, 219, 222, 225, 227 to 262 inclusive, 263 to 270-B inclusive, 294, 295 (pp. 1, 2, 14, 15 & 19) (There have been added to Exhibits X-294 and X-295 figures for the year 1931 which did not appear in the Exhibits for the Illinois Case). 307, 313 to 319 inclusive, 321, 322, 335, 343, 348, 353, 356 to 367 inclusive, 369 to 394 inclusive, 397, 398, 420, 422, 433, 434.

Deposition Exhibits. 1, 3 to 12 inclusive, 18, 20, to 23 inclusive, 26, 28, 30, to 32, inclusive, 34, 38, to 53 inclusive, 66 to 77 inclusive, 101, 110, 111, 114, 119, 122 to 134 inclusive, 138 to 144 inclusive, 146 to 193 inclusive, 195 to 197 [fol. 1463] inclusive, 199, 202, 204, 205, (which were introduced by defendants in said cause).

Provided, further, that all of the defendants' testimony in the Illinois case included in said abstract of testimony described in subdivision one of this stipulation, and all of the defendants' exhibits in said Illinois case included in this and succeeding sub-divisions of this stipulation are to be admitted in evidence subject to the objections made thereto by the plaintiff in the Illinois case which are contained in said abstract of record and in the additional objections made and filed by the plaintiff in said cause.

Third. In addition to the exhibits which were introduced in evidence in the Illinois Case and are above enumerated, there have been prepared the following exhibits, bearing the following numbers, viz:

A-88-B, A-93-B to A-96-B, inclusive, A-101-B, A-108-B, A-112-B, A-113-B, A-117-B, A-118-B, A-119-B, A-121-B, A-124-B, A-150-B, A-151-B, A-152-B, A-153-B, A-154-B, A-155-B, A-156-B, A-157-B, A-158-B, A-159-B, A-160-B, A-161-B, A-162-B, A-163-B, A-166-B, A-167-B, A-168-B, A-169-B, A-170-B, A-174-B, A-175-B, A-179-B, A-197-B, A-200-B, A-201-B.

The exhibits above listed, each of which has the letter "B" following the exhibit number in the Illinois Case, contain information and data relating to The Ohio Bell Telephone Company similar in character to the information and data relating to the Illinois Bell Telephone Company contained in the corresponding exhibits in the Illinois Case. It

is hereby stipulated and agreed that the testimony of the various witnesses above listed with respect to the original exhibits in said case shall apply to and be considered in connection with the corresponding "B" exhibits above listed, which it is stipulated and agreed shall be admitted and received in evidence in this cause.

Fourth. It is further stipulated that the following data and information, prepared in exhibit form, be admitted and introduced in evidence in this cause identified by the following exhibit numbers:

A-196—Circulars sent to employes of The Ohio Bell Telephone Company who had subscribed to stock of the American Telephone and Telegraph Company when the market declined.

A-208—The Ohio Bell Telephone Company Benefit and Pension Plan with amendments thereto.

A-269—(a) Agreement between the Bankers Trust Company and The Ohio Bell Telephone Company by which the former acts as trustee for the latter under its pension and benefit plan.

Fifth. It is further stipulated that Exhibit A-90-B gives the same information and data which was contained in Exhibit A-90 in the Illinois Case but also contains the complete [fol. 1464] figures for the year 1931 instead of only for the first eight months of that year. It is agreed that said Exhibit A-90-B is introduced and admitted in evidence and that the abstract of testimony of Richard H. Gregory in the case above referred to relating to Exhibit A-90 shall be equally applicable to Exhibit A-90-B, and that the added figures for the year 1931 were taken from the books of the Western Electric Company.

Sixth. There have been introduced in evidence in this case exhibits showing the separation of the property, revenues and expenses of The Ohio Bell Telephone Company for the year 1930 and preceding years. It is stipulated and agreed that for each of the years 1931 and 1932 the percentage of the total property of The Ohio Bell Telephone Company devoted to the service of the public in Ohio and used in the transaction of its intrastate business was substantially the same as the percentage of such property devoted to the service of the public and used in its intrastate business for the

year 1930, and that the percentage of the total revenues and expenses of The Ohio Bell Telephone Company attributable to its intrastate business for each of the years 1931 and 1932 is substantially the same as such percentage for the year 1930.

Seventh. It is agreed that the requests of the Attorney General of Ohio dated October 1, 1931 numbered 5, 7, 10, 13, 15, 16, 24, 25 and 26, toge-her with the answers thereto, also five statements delivered to the Attorney General of Ohio in response to his request dated October 22, 1932, and thirty answers to requests of the Attorney General dated June 17th, 18th and 19th, 1931, shall be and hereby are made a part of the record in this cause.

Eighth. The abstract of testimony, the indices and objections above referred to and the "A" exhibits shall be furnished by The Ohio Bell Telephone Company. The "D", "X" and Deposition Exhibits shall be furnished by Special Counsel for the Commission.

Gilbert Bettman, Attorney General; T. J. Herbert, Special Counsel for The Public Utilities Commission of Ohio. Karl E. Burr, W. H. Thompson, Attorneys for The Ohio Bell Telephone Company.

Dated December 20, 1932.

[fol. 1465]

Oral Evidence in Company-Wide Case No. 3307.

[fol. 1466] BEFORE PUBLIC UTILITIES COMMISSION OF OHIO

No. 3307

In re Conference on Telephone Rate Cases

Statement of Evidence

Proceedings Before Hons. George T. Poor and Frank B. Maullar, Public Utilities Commissioners, Monday, December 15th, 1924

APPEARANCES

Messrs. Karl E. Burr and C. S. Maltby, on behalf of The Ohio Bell Telephone Company.

Mr. W. S. McConnaughey, on behalf of The City of Dayton, Ohio.

Mr. F. M. Dotson, on behalf of the City of Toledo, Ohio.

Mr. Carl F. Shuler, on behalf of the city of Cleveland, Ohio.

Mr. H. M. Hagelbarger, on behalf of the City of Akron, Ohio.

[fol. 1467] Messrs. Chas. A. Leach and L. C. Laylin, on behalf of the City of Columbus, Ohio.

Mr. J. E. Kennison, on behalf of the City of Canton, Ohio.

Mr. W. E. Lewis, on behalf of the City of Youngstown, Ohio.

Mr. John J. Boyle, on behalf of the City of Hubbard, Ohio.

Mr. L. B. Ogle, on behalf of the City of Marietta, Ohio.

Mr. Chas. H. Drinkle, on behalf of the City of Lancaster, Ohio.

Mr. B. F. Jenkins, on behalf of the Village of Girard, Ohio.

Mr. D. S. Lindsay, on behalf of the City of Piqua, Ohio.

Mr. W. W. Giffen, on behalf of the City of Niles, Ohio.

Mr. E. L. Young, on behalf of the City of Ripley, Ohio.

Mr. G. W. A. Wilmer, on behalf of the City of Middletown, Ohio.

[fol. 1468] Mr. E. B. McMaster, on behalf of the City of Steubenville, Ohio.

[fol. 1469] Morning Session

Monday, December 15th, 1924.

Commissioner Maullar: Gentlemen, if you will just announce your presence so that the stenographer can make a record of those participating in the conference.

Mr. McConnaughey: W. S. McConnaughey, Special counsel for the city of Dayton.

Mr. Dotson: F. M. Dotson, attorney for the city of Toledo.

Mr. Shuler: William Shuler, Director of law, Cleveland.

Mr. Lewis: Wm. E. Lewis, Law Director, Youngstown.

Mr. Boyle: John J. Boyle of the Village of Hubbard.

Mr. Hagelbarger: Henry M. Hagelbarger, Director of Law, Akron.

Mr. Leach: Charles A. Leach, City Attorney of Columbus.

Mr. Kennison: J. E. Kennison, City Attorney, Canton.

Mr. Wilmer: G. W. A. Wilmer, City Attorney, Middletown.
Mr. Lindsay: D. A. Lindsay, Piqua, Ohio.
Mr. Giffen: W. W. Giffen, Niles.
Mr. McMaster: E. D. McMaster, Steubenville.
Commissioner Maullar: Is that all?
Mr. Burr: Karl Burr.
Mr. Maltby: C. S. Maltby.

[fol. 1470] COLLOQUY

Commissioner Maullar: Now, as I understand it, this is a conference by which counsel for the various municipalities and counsel for The Ohio Bell Telephone Company, for discussing plans and procedure for the state wide rate hearing. Since it was called at the instance of the City, I presume it will be proper for some one representing the City to open the discussion.

Mr. Dotson: May it please, Your Honors, I simply take the liberty to make this brief statement at this juncture, inasmuch, as the calling of this meeting devolved upon me in sending out the necessary notices. I simply want to advise the Commission at this time that the notices were sent out in accordance with an arrangement that was reached at the time several of the City Solicitors, including myself, called upon members of the Commission with reference to some action being taken whereby we could all reach and have an understanding of the method of procedure with this consolidated rate case.

This was occasioned by a conference of a few of the attorneys of certain cities of the state that were involved and had been involved in rate cases; some of them representing cities in which the rate cases had been pretty thoroughly presented so far as their municipalities were concerned.

The desire as far as it had been in any manner expressed, of course, naturally is that of co-operating with the Com-
[fol. 1471] mission just as far as it is at all possible on the part of the municipalities in the conduct of the consolidated rate case. In sending these notices request is made that the parties notify and advise whether they would be present or not. Not all responded to this request; but in the

response this morning, and listing the names of those present, it seems that all are here who did respond to the request embodied in my request to be here. Assuming that those who are not here are not here due to the fact that probably no provision was made for their appearance, and they were not for that reason able to be here.

All of the various communities that are involved in this rate hearing, no doubt realize the vital importance of the procedure, so far as it affects their local interest, and no doubt later on, as the case proceeds, they will be present and contribute their share to the effort.

We have, Your Honors, not been in position to meet together as representatives of these various communities and discuss any ways and means and methods that could be suggested by us, and I apprehend, Your Honors will find that we are in a receptive mood; desirous first of all to listen to any suggestions that the Commission may have to make. It is possible perhaps that the Commission has given some study to the new order of things, and we are not agreeing to, nor do we want to inject any view at any juncture that would conflict with the views of the Commission, so far as they have worked anything out.

That is, I believe, all that I have to say at this time; sim- [fol. 1472] ply to advise the commission of what steps have been taken to procure this attendance and suggest briefly our tentative position in the matter.

Commissioner Maullar: Mr. Dotson, while you are talking on that point, do you have any suggestions as to the plan of procedure?

Mr. Dotson: Well now, Mr. Commissioner Maullar, if I said anything at all in that respect, it would be purely from a personal standpoint. It couldn't in any manner reflect the views of those interested in the procedure.

Commissioner Maullar: If you will, just see how it fits in with the general concensus of opinion.

Mr. Dotson: Well my views will not be many. They would be those secured from other sources. Naturally we have pursued the course an attorney generally does pursue. He tries to find some authority for certain things he wants done, or finds must be done; and in looking the matter up there is an authority of a case in New York State—a telephone rate case there—where there were a hundred and thirty five various telephone exchanges involved in in-

dividual rate cases; and the Commission after working two years upon the hearing and the counsel of those cases, succeeded in disposing of two cases. And, the Commission thought if no more progress at rapid procedure could be made in the disposition of the hundred and thirty five cases than had been made in the disposition of those two cases, concluded that the time to be devoted to it would be [fol. 1473] an indefinite thing and it would be wholly impractical and something had to be done, it felt, to secure in some way the expeditious disposal of those cases. As a result an order was made consolidating all of the cases in one case, as has been done in this instance; and the Commission made an order setting forth in what might be termed, specifications, of its inquiry into various phases of the case that the commission would consider, and these incorporated or included demands upon the Telephone Company to make a showing of a certain character with reference to the various specifications set out. I have the authority here. It is, I think, on page—I will not read it—but I just want to call the commission's attention to it. Probably you are familiar with it. It is in Vol. A, 1922, page 497 P.U.R., and the order was made by Commissioner Blakeslee, page 377 of the New York Public Utility Report. There were twenty three specifications set forth in the order, and I simply want to call the Commission's attention to it.

A further report is made in the proceeding in the same case, Public Utility Report 1922 D, page 18, where a number of rulings were made in that report, as a result of the procedure that had been had upon these and with reference to these specifications. This case probably, we may find, offers in a large degree a measurable program for our procedure here. It might be well for us to consider this case and see to what extent it will fit into the needs of the present consolidated rate case.

[fol. 1474] The Commission there seems to have gone into the matter very thoroughly and seems to have handled the case quite admirably. It ought to properly afford us a source of help just at this time.

Outside of this decision now I haven't anything to suggest further than to use this as a basis for any further suggestions I might find I am able to make, and with those

I have nothing further to suggest to Your Honors at this time.

Commissioner Maullar: All right; let us hear from some one else.

Mr. McConnaughey: If the Commission please, in the discussion of this situation that is created by the order of the Commission consolidating these cases, as Mr. Dotson has indicated, those of us who have had rate cases pending before the Commission, have been long trying to determine among ourselves just how this order has affected the situation in which we find ourselves. Some of us have cases that are here pretty well along toward completion and we are wondering just exactly what our status is in this case, for one thing.

We are wondering just about what our status in the cases are that are pending and practically completed, and what is to be the further course toward the completion of those cases; whether they will wait the state wide inquiry that is contemplated by this order, or whether there is anything to be done in those cases, pending that further action in this consolidated case.

Then there is another thing, we are wondering if the order to file an inventory is all that the Commission ex-[fol. 1475] pects to ask in the way of primary information from the Telephone Company. As was pointed out by Mr. Dotson, in the New York case there were some twenty-three specifications of different classes of information; all of which seemed to us to be basic and essential in arriving at a conclusion finally in a rate case; and we are wondering if it is possible for this Commission to go forward with nothing but an inventory from the Company as the basis for its further action.

Another question that has occurred to some of us is the manner in which, or the propriety of the cities attempt to do anything about this case at this time, or until valuations and other data had been made.

The inventory that has been filed we have just barely glanced at, and we find that what the Company has done is doubtless within the provisions of the order of the Commission; but in many respects it does not seem to us to be a valuation or an inventory which can be considered as final for use in this case; because only in the instance of real property and central office equipment is there any location

of the property. So that it would not be possible on the basis of this inventory to determine what was the valuation to be considered in the establishment of a rate in any locality. Just how that is to be worked out is one of the things that suggests itself as a matter of inquiry.

We have also the problem about which we have been speculating, as to just how this inventory and valuation is to be handled. To our minds this step is one of the most [fol. 1476] important things that this Commission has ever done. It is a start toward the fixing of telephone rates in the State of Ohio, on a basis which ought to be the absolutely right basis. It goes to the foundation of the situation. It treats the Company as a state wide unit and furnishes the opportunity for getting started right.

In a rate situation which affects so many people as does this one, there are two things that seem to us to be essential. In the first place that the rate in itself should be the correct rate; and in the second place whatever the rate may be that the public which uses the telephone and pays the rate, should be satisfied that they are being treated with entire fairness in the fixing of the rate. Those two considerations suggest the necessity for a great deal of care and the doing of this job in the best possible manner. We want to be helpful in that situation and we do not know how that can best be brought about.

No city in the State of Ohio, of course, is proposing at this juncture to employ experts to check or offer their services in connection with this state wide valuation. The job is too big for any one city and goes beyond what might reasonably be expected. Naturally, and as a matter of course, we cannot be expected to approach this situation as some of us have approached our local situations. We are looking to this Commission to take whatever steps are necessary to assure the people of the State of Ohio that the inventory upon which you are asked to fix this rate, is a correct inventory and that the property is properly valued [fol. 1477] and that any other consideration that should finally find its reflection in the rate, should be given the very best possible consideration by the very best possible talent that is available for the purpose. It is, I think, probably the biggest job that has ever confronted this Commission in the way of a valuation inquiry. It is one that calls for the expenditure of a great deal of money. We do not

know what provisions have been made for the making of this valuation—what financial provisions have been made—what resources are at the hands of the Commission for that purpose. If appropriations are necessary from the General Assembly to put through this job in the exactly right way, if any of us have any influence back home to bring about any situation which the Commission considers desirable, we are here to offer that local influence for that purpose.

We do not know what the correct program should be. We assume that the next step, so far as this inventory is concerned, is to determine whether or not it is correct, and then the values. My personal attitude is one of a desire for information as to how we can best proceed to further this inquiry and bring it to the conclusion that we all desire.

Mr. Kennison: May it please the Commission, it seems to me, and I am inclined to feel that the gentlemen who are here this morning, are somewhat embarrassed in that they do not wish to be put in the position of embarrassing the [fol. 1478] *the* Commission; and for that reason they are a little reluctant to make suggestions which they might have in mind.

I think frankly, however, that what is in the minds of all men who are present here this morning is the thoroughness with which the Commission expects to get into this matter and the means they may possess; and the cities, I think, have believed for some time past that it is totally impossible for municipalities, fighting single handed, to make an expenditure of money which justifies the hope that is in the mind. They cannot possibly meet it any longer.

I think the cities would like to go to the legislature and ask it to provide the funds for the Commission making as exhaustive a survey that responds to their ambitions as possible. That is really, I think, what brought the men here this morning; to determine the financial means of carrying on the order of the Commission.

Personally I have never seen the order. I read it in the newspapers, and I think some of the men who are here this morning are not present by reason of having appeared before this Commission on rate cases; but they came in response to a general invitation. It is difficult for them to offer the Commission suggestions. They do not know what the Commission has in mind; but they do have this in mind, all of them I think, that if the Commission desires to go to

the legislature asking for an appropriation for the purpose of conducting a thorough painstaking examination, in order that the purpose of their order may be fulfilled, they want [fol. 1479] to render them assistance, and I think that is what most of them had in mind when they came here this morning. I think they feel the Commission is going to go forward in this hearing, reserving to the cities the right to suggest to the Commission any matters which they think are pertinent, in order that they may properly protect themselves as a matter of law. If the Commission wants concrete suggestions, it might be well that various counsel who are here, suggest in writing to the Commission the matters which they think are pertinent and to be considered by the Commission and its Valuation Engineers at the time of making this.

Aside from that it seems to me all that they can do is to give to the Commission whatever assistance they may desire in securing the necessary financial assistance from the legislature to carry out the program. We do not know what it is. We do not know what it will cost. We do not know how thoroughly the Commission at present is equipped. We do not know the extent of its engineering staff, or what it has in mind. That is the reason it is difficult for us to give suggestions. If we knew the Commission's needs; if we knew the extent of the Commission's program; if we knew how thoroughly the Commission wished to develop the purposes of its order, I think you would find more freedom of expression from the floor.

Commissioner Maullar: The Commission would like very much to hear from all who have any suggestions to offer in the first instance.

[fol. 1480] Mr. Hagelbarger: If the Commission please, I heartily agree with what has been said by the three preceding speakers, and they have set forth very logically, as I can believe, the program and the necessity for action. I can not quite agree with my friend Kennison of Canton, who suggests that the Commission ask of the legislature certain appropriations.

Mr. Kennison: That was not my suggestion—I beg your pardon.

Mr. Hagelbarger: Well you didn't mean it that way I am sure.

Mr. Kennison: Oh no; I did not mean it that way.

Mr. Hagelbarger: Well I assume that you didn't mean it that way.

Mr. Kennison: No.

Mr. Hegalebarger: I am sure the Commission would not feel like asking anything of the legislature; but the cities, it seems to me, that are interested will see to it that the local representatives from the various counties where the cities are situated, may be informed of the necessity of having an appropriation, so that this Commission may direct a state wide valuation here of telephone property, which can be used in determining rates; and I think those representatives of the cities that are here certainly agree on that proposition. I haven't anything further to add in regard to the program than has already been suggested by the three preceding speakers.

[fol. 1481] Mr. Lewis: I believe all the gentlemen who are here assembled today wish to be fair to the Telephone Company; but in order to be fair and in order to understand the situation thoroughly, it is necessary to have a comprehensive survey made now.

The cities singly and alone cannot accomplish the purpose of what is necessary in considering state wide valuations, and I agree with what has been said by the preceding speakers. What my friend Mr. Hagelbarger from Akron said is very true. If there is any help which can be given by the people back home, any influence we might have to go to the legislature to secure an appropriation for the expense of making a state wide survey, and other expenses incidental and necessary thereto, why I feel sure that the representatives assembled here today will be glad to lend their influence along that line.

Commissioner Maullar: Anything further to offer by the cities?

Mr. Shuler: Mr. Commissioner and Gentlemen, there was no difficulty about the rates in years gone by. It is just in recent years that the question of rates is causing so much concern. The consolidation of the Telephone Companies perhaps has had something to do with it.

In such rate cases as I have been interested in, the Telephone Companies have brought forward merely book records of their valuation, and that is apparently not based on any physical investigation of the property upon which they have those book values. I think it would simplify the work [fol. 1482] of the Commission if the Telephone Companies

were first required to give a detailed and itemized account of the various poles and equipment and switchboards, and so on, that they fix this valuation upon, so that the Commission's experts or the municipality's experts might check them up on their valuation.

Mr. Lewis has well said, the people generally are willing to pay a reasonable rate and they want the rate to be based on the law, requiring it upon the actual valuation, not upon a mythical valuation or a mere book account valuation; and I would like to make this suggestion to the Commission that they first require the Telephone Companies to give a detailed and itemized statement to each of the municipalities of the various properties there, upon which they fix their valuation. So that they can, with the aid of the Commission, check up those values and be able to meet them if there is any difference in views as to their value.

Commissioner Maullar: Anything further on behalf of the cities? If not, I think Mr. Burr might explain what the inventory submitted is, and what it proposes in the way of submission of inventory, and anything further you might have to say in regard to procedure.

Mr. Burr: Speaking for the Telephone Company, Your Honors, I appreciate the courtesy of counsel for the municipalities in inviting a representative of the Telephone Company to attend the meeting, because in reality, as I understand it, this meeting was called as a conference between the [fol. 1483] representatives of the municipalities. As it was so called the Telephone Company certainly appreciates the opportunity to be present and to take part in the conference. The Company also appreciates the spirit in which the gentlemen on the other side—and I call them the gentlemen on the other side for the want of a better term, or a shorter term—I say the Telephone Company is certainly gratified with the spirit in which the gentlemen have approached this question.

As said by Mr. McConnaughey, it is probably the biggest thing ever attempted by the Commission. From the standpoint of the Telephone Company it is certainly the biggest thing which has ever been attempted in connection with its business, or its rate, or property, or all of them combined.

We had here at the time when the Commission's consolidation order was entered, the situation of some forty odd pending rate cases. Some of those cases are what are known as Advanced Utility Rate Proceedings, in which

schedules have been filed by the Company; complaints have been made against the schedules; their operation has been suspended for the statutory period of 120 days; and it having been impossible to complete the hearing as to the reasonableness of the rates by the expiration of the 120 day period, the rates have gone into effect under bond, as provided in the so-called Pence law.

Another class is represented by the cases in which the Company, prior to the enactment of the Pence law, has [fol. 1484] asked the Commission to fix the rate to be charged by the Company for its unified service after unification.

Another class is represented by cases in which after rates have become effective, a complaint or complaints have been filed against them and the cases have proceeded in very much the same manner as those in the second class to which I have just referred, except as I say there the complaint has been filed after the rates have become effective.

All of the foregoing cases which I have in mind involve exchange rate cases only.

In addition to that there are two cases which affect the rates or dues or charges of the Company as a whole: That is to say, throughout the State and throughout its territory in the State, namely the toll rate case involving all the Company's toll rates and the service connection charge case involving proposed service connection charges for all exchanges. The hearings in those cases have occupied an almost endless amount of time. In certain respects there have been necessarily a duplication of testimony. The Dayton case, for example, has already occupied two years and a half. There have been weeks and weeks of trial, to say nothing of the preparation. To the gentleman from Dayton the case has undoubtedly seemed a long one; it has to the Telephone Company. But when it is considered from the standpoint of the Commission, that during the pendency of that case the Commission has also had to hear the Youngstown case, the Akron case, the Toledo case, the Fostoria case, the Barberton case, the Cuyahoga Falls, Canton and [fol. 1485] so on, almost without number, the Telephone Company is not surprised and has not been surprised at the issuance of the consolidation order in those cases.

In an attempt to comply with the first order which provided for the filing of a complete inventory of all of the company's property by December 1st, the Company has

filed what it believes to be an adequate inventory. It is true that the inventory is not sub-divided by exchanges, as one of the gentlemen suggested that it should be; but if it is to be so divided, then we get right back into a large number of separate exchange cases, which is exactly what I understood this procedure is intended to obviate.

But to get back to the inventory as filed, for a moment; that is an inventory of all of the Company's property. It is not a book inventory. It is one made by actual count in the field. It is one from which the Commission's telephone engineers can check the entire property of the Company. If it is not sufficient in any respect, of course, the Telephone Company will make every effort to so amend the inventory as to conform to the Commission's views on the subject; but we believe that the property is all inventoried and so inventoried as to enable the Commission's engineers to make an intelligent check of it. So much for the inventory itself.

On the theory that the commission would desire the Telephone Company to go forward with evidence as to the value of the property; or stating it in another way, the Commission would want the Company to proceed to evaluate the [fol. 1486] property covered by the inventory, the Company is now proceeding with such an evaluation; and the work is going forward just as fast as it possibly can. Within a reasonable time the Company will be prepared to produce its evidence on the subject of the valuation to the Commission.

The case not only involves, as the gentlemen on the other side know, the inventory of the Company's property and its values; but also there are many other issues. One of the large issues—and "large" is the proper term—is the propriety of the License contract. A large amount of testimony has already been offered by the Company in support of that contract. There has been a certain amount of cross-examination of the Company's witnesses; but on that particular issue the case is in this condition. The cross-examination of some of the Company's witnesses has been waived. The right to cross-examine some has been reserved, and the desire to cross-examine others has been definitely stated. It would seem that the representatives of the city could determine within a very short time as to what cross-examination they actually desire on that issue, and that by notifying the Company and the Commission at an early date, a

date could be fixed for a hearing, at which the Company would produce witnesses desired for cross-examination on the subject of the License contract. Also, on that issue the cities reserved the right to offer rebuttal testimony.

[fol. 1487] As soon as the cross-examination of the License contract witnesses is terminated, it would be my suggestion that the cities go forward with their evidence against the License contract, if they have any to offer; so that that issue in the case, which is now already more than half way completed, could be terminated insofar as the major portion of the testimony on the subject is concerned; not with the idea of foreclosing any one from offering any further evidence they might have, but with the idea that all the evidence which we now have to offer on the subject might be put in the record and get that part of the record cleaned up and laid aside.

In the Toll Rate case a large amount of evidence has already been offered for the Company. Certain reservations have been made in that case. I don't know how far counsel at this time would want to go forward with that part of the case; but the Telephone Company is ready and willing to co-operate with them in an effort to conclude as many issues as possible at this time.

Be all that as it may be, the Company within a reasonable time will be ready to go forward with its valuation evidence, if the Commission so desires. It is assumed that after all the evidence is in; after the Commission shall have made the tentative valuation; and after the final valuation shall have become fixed, the Commission will thereupon proceed to fix a schedule of exchange rates for all of the ex-

[fol. 1488] changes of the Company in the State, classified by exchanges; and also a schedule of toll rates for all of the toll rates of the Company in the State of Ohio, classified in very much the same way as those rates are now classified.

The Indiana case has been spoken of as a precedent for this kind of a case; but the precedents are a little more numerous than that single case. Last year, Indiana—and by Indiana I mean the Indiana Commission—completed a valuation of the Telephone Company's property on a company wide basis, and announced just such a schedule of rates as that to which I have referred; a schedule of rates for all the units in the State, classified by exchanges; and the toll rates for the State were also fixed. It has been

done in several other states. West Virginia is now in process of doing the same thing, and I think Maryland also. So it goes. And, as Mr. McConnaughey I think it was said, this really is the first step in an effort to make telephone rates scientifically for all of the territories served by the Ohio Bell Company.

One word on a subject which has been uppermost in my mind, and evidently in the minds of counsel from the beginning. Of course, I do not know what the Commission's resources are, and I do not know what assistance, if any, will be necessary in order to evaluate the property of the Company.

Speaking for the inventory, however—and this is only a suggestion which may sound very bumptious, but I make it for what it is worth—speaking of the inventory we have [fol. 1489] filed in this State inventory after inventory in different rate cases. This has been checked and rechecked. Checked by the Commission and checked by the engineers employed by the municipalities; and with the exception of the Dayton case, in which there has been some controversy as to the proportion of poles owned by the Telephone Company or the Electric Light Company, I believe that the oppositions count,—both the Commission's and the representatives of the municipalities may be included in that single term for the time being—in every case the opposition's count, the opposition's check, has given the Telephone Company's inventory a clean bill of health, and we have taken perhaps a certain amount of justifiable pride in the way our inventories have been made and the result of their check.

I can instance one particular case, in which I would like to have some of your gentlemen read the decision in the Findlay case; where the City of Findlay spent a great deal of money in an effort to prove that the inventory was incorrect, and the engineer employed by the City of Findlay went on the witness stand and said that as far as the inventory went, there could be no possible disagreement between him and the Company, because he checked it all the way through and it was absolutely correct and he marked it one-hundred per cent good.

So we are willing to go to any limits to assist the Commission in checking our inventory; but neither in the inven- [fol. 1490] tory, nor on any other part of this case, does

the Telephone want to spend money unnecessarily. I may say that in some states where inventories are being made the cost is so staggering that I would not attempt to mention the amounts involved here; but it all comes out of the pocket of the public sooner or later; and one of the things that I am hoping for in this case will come, some better understanding between counsel and the Company as to the correctness of our inventory and the fairness of the method by which it has been prepared.

The next thing is that the Company, of course, is ready and willing to furnish such information as the Commission may think necessary on the different questions as they arise. It may be as to some of them the Company will have to save this cost; but I don't anticipate anything of that sort now; but I would at this point in the case, beg the gentlemen on the other side to limit their request for information to such information as will have some real bearing on this case; and I say that because in some of these cases—there is no use of going into explanations on the subject—but in some of these cases we have furnished hundreds of pages of figures and other information at the request of the engineers employed by the cities; and after that information has been in their hands for six months they have asked for it over again; and on many occasions they have asked us for information which they already had and which [fol. 1491] they did not even know they had; and the preparation of that information has cost thousands and thousands of dollars. Some of the cities have even been billed for some of it recently, because the expense became so heavy.

That is a good deal more than I intended to say and I hope that there can be a spirit of co-operation in this case which will get us to a speedy answer for all exchanges of the Company. As to the cases which have already been submitted, Mr. McConnaughey referred to those which are perhaps almost ripe for decision. My own judgment is that they will reach the decision more rapidly in this case than they will if they blunder along separately as they have. That is my judgment and I only give that as a suggestion for what it is worth.

But, please, I beg of the gentlemen on the other side, when they make up their minds for information which they want, let the lawyers themselves please supervise the re-

quests for that information, in order to determine in advance, to their own satisfaction at least, whether or not the information will have any relevancy when given.

In that way I think we will get much further than we have before. Of course, since these cases started some of the much mooted points in the cases have been decided by various courts. Perhaps some of the underbrush that might be said to have surrounded a case of this character has been cleared up. I am not sure how the gentlemen on the other [fol. 1492] side will feel about it; but we feel that some of it has been; and it seems to me that in the light of the experience of the last two years, and in the light of some court decisions, we ought to be able to go into this case with our ideas better crystal-ized as to what the real issues are, and that we ought to be able to limit ourselves to those issues instead of trying to cover the whole subject of utility rate making from every standpoint that has ever been attempted. I think we have most of them in these cases in some way or other.

Now if you will excuse me for having made a very long winded speech, I will close.

Mr. McConnaughey: Mr. Chairman, just one thing that has been suggested by some of the remarks of Mr. Burr. It has occurred to some of us in discussing this order, as has been indicated, that the question of a valuation is only one thing. Perhaps the basis thing, but only one thing that ought to be covered in this inquiry; and some of us have thought that this order, this request, or direction of the Commission, to furnishing information ought to be broadened in several particulars.

I have been wondering as I sat here if it would not be in the line of orderly procedure and perhaps helpful in the final solution of everything, if those parties that have those ideas put them in concrete form, in the form of an application to the Commission for a direction to the Company to furnish these additional things that they think are essential, and bring it before the Commission in an orderly way [fol. 1493] in that manner. I hesitate a little to make that suggestion, because there has been in our minds the possibility, since the Commission is moving so splendidly in this matter in a large degree, that there may be something of the same kind in the minds of the Commission; and we do not want to interfere with anything. But, we have that

thought in our mind and we are wondering just when the right time might be.

Mr. Dotson: That is in line with what Mr. McConnaughey has said. The same suggestion occurred to me while Mr. Burr was speaking; that this procedure should be an orderly one, in which there will be no rambling about and searching about aimlessly; although perhaps in perfectly good faith on the part of the individual units that are interested; but that the inquiry should be one of investigation and study, and that the various municipalities should fit themselves into the general program; and one way in which that could be done it seems to me is just in line with the suggestion made by Mr. McConnaughey, that when we think we have some inquiry that should be made, that it be formulated and presented to the Commission, and that all of the orders on the Company for information should come from the Commission; and then you have a record of the inquiry in the first instance; its source from which it came and the reason for the inquiry, the purpose of it; and then it can be very adequately met; and we are getting our in-[fol. 1494] formation then in the way in which we will know what we are doing, and will not encumber this record with a- immense amount of useless effort and useless data; but we want the data to be material and in point.

Now just a word more—it must be apparent to all of us now just as to what is already in mind. I assume it is also in the minds of the members of the Commission, that this will involve an extensive study and investigation, and that you will require certain things to be done. Somebody must do that. Now this being a state wide case, naturally the individual cities cannot undertake that survey and that study. That must be done by this Commission. There is no doubt about that and this Commission is proposing to do the very thing that I think lies at the very basis, that is the origin and existence, and that is it was intended to be put in position to study these rate cases from the standpoint of the public service they are rendering, and determine what is a fair rate for this service that is given.

That cannot be done by the Commission sitting here as a Court. It must be done by the Commission as a Commission; that is, by the going out and checking up the property—the valuation—the kind of property that is necessary and the service that they are able to render, and the price

that they should be paid for that service. Now that means that the Commission must be equipped to go out and do [fol. 1495] that work. That will necessitate the securing of the proper representatives and people who are prepared and able to make that study. It means engineers and it means probably expert accountants, and so forth. That will involve an expenditure of money; but why should not this Commission, once at least, function in its natural and proper way?

As Mr. McConnaughey has said, the Commission by this order is undertaking one of the biggest things that it has ever undertaken as a Commission, and it is initially right and we want to make sure we are proceeding right, and the only way that this commission now can function along that line, is that it have the means at its hands to provide the equipment and the service of the required kind of people to make this study for these various communities, which means the State of Ohio. And in this then we are prepared to come along, so far as Toledo is concerned, and I am sure the others are, and supplement that effort and that study.

We have our engineers and do not expect to dispense with their services; but we want their services to be valuable to this Commission and to the community to that extent. The value of that service will be reflected by their study; and surely by that means we ought to be able to conduct this case orderly and in a very successful way, so as to reach the end that we are aiming to reach.

[fol. 1496] Heretofore these cases as they came up individually, naturally many things have transpired for which we do not care to be sponsors in another; because it was due to the fact that we were roaming around in unknown territory and in unknown fields of inquiry, and we took hold of things here that we ourselves discovered in the last analysis were not as important as we thought them to be in the first instance. But laying that aside—and I think that is entirely excusable, at least where it was not afterwards persisted in when we should have known better—we are now starting out on a course that we seem to have the opportunity to proceed orderly and effectively; and that is what we all want to do. None of these communities care to spend unnecessary time, effort and money upon this inquiry. We want to make everything count. So that so far as Toledo is concerned, we are willing to co-operate in this

inquiry in the broadest extent, availing ourselves at all times, however, of the benefit of the inquiry that has already been made.

Mr. Burr has suggested, I think, a very important matter in this connection. We have the 4½ per cent case—the toll case and this case. The 4½ per cent case does not involve a question of valuation. It invloves entirely a different question. It is a question of value of service, and it seems to me that branch of the inquiry could proceed perhaps, and [fol. 1497] we could finish that up while we are evolving our plan and the details of that plan for the inquiry with reference to valuation, and the questions that it will present that will be of concern to the various communities; and in that way we will expedite matters; and so also with reference to the toll case.

While there is some element of valuation in it, yet it is different enough from the regular rate case that it seems to me that we could proceed and conclude that in some respects as has been mentioned here. Beyond it all I am convinced that the program that is adopted will necessitate the going before the legislature and asking the legislature for an appropriation, money, and it should come from that source. This is a state wide inquiry and the people of Ohio are interested. The people of Ohio are paying their taxes, that is true, for public purposes. Surely there can be no objection to the expenditure of a portion of that money for an inquiry which is of such immense importance and value to the people of Ohio, and the merits of the case are apparent. There can be no doubt of the necessity for the expenditure—it is only a question of amount.

The Commission, I apprehend, will have the responsibility of determining the proper amount of that inquiry, the cost of that inquiry, at least, I don't care to shoulder the responsibility of trying to determine the amount.

[fol. 1498] If the Commission can, we are here; we will get back of it and we will do what we can to help put across the program; because I think it is worthy and it is a question of money that does not involve any other question than that of merit and of state wide importance to the people of Ohio.

Commissioner Maullar: The Commission does not see any objection to the cities making the request through the Commission for information.

Mr. Dotson: Yes.

Commissioner Maullar: In fact, I think the Commission would like to be advised on just what information you are seeking, that we may determine to some extent the availability and value of the information. As to the financing mentioned to conduct this case, you gentlemen know that the Commission is limited. Their engineering force is limited. We have got a big question here to decide. In that connection I just want to give you the expression of just one member of the Commission, that if there is an appropriation made, it should be made available for expenditure by the Commission, because the Commission must decide this question ultimately; and they want to know who is seeking the information upon which they are going to base their finding at the termination of the case.

Mr. Dotson: The cities are with you on that proposition. I think that is the proper method.

Commissioner Maullar: We hope to expedite this hearing as speedily as possible and to arrive at a just conclusion. [fol. 1499] To do that we hope to have friendly co-operation to that extent.

Mr. Shuler: Mr. Chairman, there is no question but that the Commission is determined to go ahead on the state wide proposition. That is agreed, isn't it?

Commissioner Maullar: Surely.

Mr. Shuler: Now when the Commission made that order I would like to know, for my own information, what was in their mind as to the method of procedure. As I understand it you are not going to have any separate unit valuations; be valued as a whole; is that right?

Commissioner Maullar: Valued as a whole.

Mr. Shuler: Now I just for my own information, so that the suggestion may be helpful—and that is as far as I am concerned; that is what I am here for, to find out how they can be helpful and to make suggestions later if we have any—what was the Commission's idea as to procedure; how they are going to proceed and how they are going to get the money to proceed if they need any money. As I recall, it is perfectly clear that the Commission cannot fix a rate until they make a valuation of the property. I am right in that, am I not?

Commissioner Maullar: That is correct.

Mr. Shuler: Now I don't think that any court would say

that a haphazard guess or a shot in the air would be a real valuation. I would like to know in a few words what was the Commission's idea of proceeding when they made the order.

[fol. 1500] Commissioner Poor: Gentlemen, this matter all grew out of experience. When you realize that besides the Ohio Bell Telephone Company there are some hundreds of independent companies in the State of Ohio—I think somewhere between four and five hundred independent telephone companies in the State of Ohio alone—heretofore many rates had been fixed for individual exchange units, and some of you men know the amount of time that you had to expend on a case of that kind; that it was just running out of time to determine in the individual case, where it was just absolutely a physical and human impossibility to bring these individual cases down to anything like a speedy decision. When you come to running up into the hundreds of cases, as I think there are something like thirty or forty of the Ohio Bell cases alone—that is not saying anything of the cases involved in the independent companies——

Mr. Burr: Forty-two I think we have of the Ohio Bell Company.

Commissioner Poor: Just that time alone. Now take other cases like the Cincinnati & Suburban Bell Telephone, that is independent of the Ohio State. The Commission had that case before it for three or four years. It has gone to the Supreme Court twice and that is just merely by way of illustration. This Commission came to the point and reached the conclusion that the New York State Commission did, in the case cited by Mr. Dotson, that there must [fol. 1501] be something done to expedite these matters, and the Commission started in on this to make an investigation and to see whether there was not some way in which we could arrive at speedier conclusions in regard to the matter. And, it was the opinion of the Commission that it would start an inquiry into the valuation of The Ohio Bell Telephone Company, to arrive at the information in there asked, as to the valuation of the Company, its resources or its income, and its expenses; whether it is feasible for the Commission to establish a classification of exchanges—and on what basis the Commission is to determine—and we want to determine that from the information that comes to us in this investigation—as to whether it will be feasible to

classify telephone exchanges, so that a rate would apply to all similar exchanges. I don't know, but they might be divided A, B, C and D, or class 1, 2, 3 and 4—but that is a matter that will have to have information about before you can come to a determination.

The Commission has not made a determination of that matter. That is very evident and in going into this investigation, of course, there are different ways of making the investigation. If you were a private individual going out to investigate the value of a business, you would send your experts out—you would hire your experts and send them out to make a thorough examination of that company's books, and probably have an appraisement of the property, [fol. 1502] and those parties would report to you as the man interested in either purchasing or managing the property, and you could conclude them just over the table.

But, this is a matter in which the public is involved and while the Commission intends to go ahead and make an investigation in the matter, we want the matter to be open and get suggestions from anybody that is interested, and they will be given the opportunity to present any matters that they would like, and the Commission would welcome suggestions from counsel on behalf of the cities or from individuals as to what information the Commission should ask for.

We have not determined upon just what specific information we would have to have before we get through. While, of course, the sole question in a case of this kind is not just the valuation of the property. We all recognize that you have to have some place to start, and you have to have a valuation; and realizing that the Commission has to have a place to start, we have requested the Company to submit to the Commission an inventory of all of its property.

We start out from that. We want to be satisfied that that inventory is correct, as we have done in the past, and I think Mr. Burr did state the matter very fairly. It has been our experience that there has been very little challenging of the inventories as submitted by the Ohio Bell. Our independent investigations have found that it has been [fol. 1503] quite accurate. Of course, anybody realizes there may be some omissions or things of that kind in a big undertaking; but our first idea was to get an inventory and then we would go to the question of valuation, require the

Company to submit its value, its unit prices of the items of the inventory, which will be checked and investigated by the Commission.

It is obvious to us that with our present force we are not going to gain much in the question of arriving at a speedy conclusion in this matter, unless that force is augmented somewhat; and as Mr. Maullar has said, I think the Commission—speaking for another member of the Commission—there is no question but that the force before the commission, in making an investigation for the Commission, should be under the absolute direction and employ of the Commission. The Commission must have confidence in the people that are doing the work for them.

Answering specifically Mr. McConnaughey's suggestion, the Commission has not at the present time specific requests for information to be furnished by the Company, feeling that we would be in the position to call upon them at any time for any information that we might desire from them. I might reiterate that we would be very glad for any suggestions in regard to any information that might occur to any of you gentlemen, as a whole or singly.

Mr. McConnaughey suggests what would be the disposition of the pending cases. The commission felt in making [fol. 1504] this order, and we endeavored to protect that matter in saying that any testimony or evidence that had been taken heretofore in so far as it may be considered relevant or pertinent, may be considered in this investigation, and the individual interested may augment that testimony by any matter that they see fit to produce. However, we do not think it would be advisable to continue the independent inquiries in the individual cases.

There are some matters that are not peculiar to any local situation, and as Mr. Dotson says it does not rest solely on the question of the valuation of the Company's property; but some of the practices of the Company may be investigated. I have in mind the 4½ per cent contract. That is a matter of the reasonableness of the contract existing between the Bell Company and the American Telephone & Telegraph. Now that matter does not necessarily have to wait for any valuation to be made. That is a matter of the reasonableness of that contract, and it has practically no bearing on the valuation at all. I think it would be right

to go ahead, and we might get that behind us; that is, so far as the testimony and the evidence is concerned.

Mr. Shuler: Just a word there, Mr. Poor. How can the Commission tell anything about the reasonableness of that contract unless it has what we have demanded, the dope from New York, to see what that costs them?

Commissioner Poor: Well I did not intend to say any-
[fol. 1505] thing to convey that I was passing on that in any way. I was just saying that that inquiry was not dependent upon the physical valuation of the property in Ohio. I did not mean to say——

Commissioner Maullar: That is the 4½ per cent question.

Commissioner Poor: I did not want to say that was contingent upon the cost of that service. I did not mean to say that.

Mr. Dotson: I did not mean by my suggestion, Mr. Poor, that the proceeding with the 4½ per cent case, that that contemplated the conclusion of that case upon the conclusion of the taking of testimony we are now engaged in. We stopped last summer right in the midst of the case. I had in my mind the thought that we would go on and finish that part of the inquiry. Now the case naturally I suppose would stand open so that in the general investigation of this entire question, there may be further inquiries we want to make in the 4½ per cent rate case, to clear up and help out the determination of the general question.

Commissioner Poor: I think you are quite right, Mr. Dotson, and I do not believe the Commission would be warranted or justified at this time as to fixing a time limit on which phase of the case should be absolutely closed.

Mr. Dotson: No.

[fol. 1506] Commission Poor: We may reach that point some place in the case where it will be necessary to say, "Now gentlemen you must get all of your testimony in regarding this phase of the case by such and such a time"; but we are not saying anything of that kind at this time.

Commissioner Maullar: But there is no reason why we should not proceed while we are waiting for the valuation. Why not proceed and put in the testimony in the 4½ per cent case?

Mr. Burr: To that I make two suggestions; one that the Commission set a date for the proof of the inventory, includ-

ing the manner in which the inventory was made, and the method as to its preparation; and second the date for the cross-examination in the 4½ per cent case.

I know there is one witness, Mr. Cox, whom I think you all wanted to cross examine. He is a witness who comes from the greatest distance, and if the Commission will fix a date we will endeavor to have him here for that date. We will also endeavor to have any other witnesses in the direct employ of the Company here at that date.

Commissioner Mauller: All right.

Mr. Leach: If the Commission please, I see it is noon and I do not want to detain you very long. I have not been in the previous conferences that have been held on this matter and I came here this morning trying to see if I could get into my mind something definite and concrete as to just what [fol. 1507] part an individual city would play in this procedure. For instance, I understand this morning from Mr. Burr that the inventory is made as a whole. It is not allocated to localities. In view of that fact, if the state wide hearing is to proceed—assuming that we are to proceed on that theory—what could I as an individual do in this hearing; or rather as a representative of my city? There are some questions of procedure here that I take it will have to be reduced to a concrete definite basis, and maybe that has been in the minds of others, but it has not reached that point in my mind. For instance, here is an inventory state wide, not allocated as to localities. There usually is not very much difficulty about the accuracy of an inventory; but assuming that there were such a question, would it be in any wise possible for me to conduct an independent inquiry as to the correctness of that inventory in so far as it affected the city of Columbus? I assume that would be impossible if it were made as a whole; or assuming that the inventory as a basis is found to be correct; and the matter then proceeds upon the state wide inventory. Certainly the city of Columbus acting as a city, or the city of Toledo acting as a city, cannot enter into an inquiry as to the valuation of the entire property. This is in one sense an adversary procedure, and in another sense it is not.

Ordinarily these procedures, where there is a rate case, [fol. 1508] are between the Telephone Company and the city of Columbus, and Mr. Burr will be on one side of the table and the city attorney on the other. But here is a case where

Mr. Burr is on one side of the table, and who is on the other side? Nobody.

Mr. Burr: Nobody?

Mr. Leach: What is everybody's business is nobody's business, and there is no one city attorney or no group of city attorneys that can conduct an investigation of that sort as affects the whole state of Ohio, and do it in any consistent definite concrete manner.

That seems to me as one of the things that has got to be worked out here in some definite fashion; so that there is a central responsibility of engineering and legal counsel upon one side of the table as well as upon the other.

It would possibly be feasible to try this in sections; but as has been suggested why we are back then about where we started from, and we still have the various localities—the case divided up into various sections. But if it is not done in that way why then the city attorneys cannot, as a whole or collectively, conduct any intelligent investigation of the proposition.

In other words, there must be centralization of authority somewhere if it is to be considered at all as an adversary procedure. Where is that legal and engineering check-up [fol. 1509] to the Company's inventory and valuation to come from? That is the thing that I have not been able to answer in my mind, and it seems to me that is the first foundation stone that has got to be laid in this matter of procedure. Just how do we proceed?

If we consider it, the only alternative of that that I can see at all, is that which may be running through the minds of some of the gentlemen, that the matter be not considered as an adversary procedure in any regard; but that the Commission itself be given the necessary force to make its own investigation; which will be, of course, entirely proper; but that leav-s the city without being in any position, indevidually or collectively, to enter into an examination of this matter for itself, if it is desirable so to do. I don't know whether it is or not.

Those are the questions, Your Honor, that are running through my mind as I have been sitting here wondering; to make a concrete case of it, when it comes to the matter of the city of Columbus, for instance, what part I would be expected to play, or rather what part the city itself

would be expected to play, or what part could it play in aiding this matter.

If it is to be a state wide valuation, witnout allocation of inventory or without allocation of value, then I don't see where there would be a thing in the world that a city, acting for itself, could do to aid or take part in the proposition at all; without attempting to go through the entire case for [fol. 1510] the entire state, which, of course, no one city could do.

Those are the things that so far as I am concerned I want to think about, and they will have to be thought about somewhere. It seems to me that if there is to be a concentration of effort, if there is to be a state wide valuation as they affect Cincinnati or Cleveland or Dayton or Columbus, except in the sense that we perhaps will have a succession of these exchanges—but considering it as one big utility and one big state, why then inasmuch as the effort, engineering skill and legal counsel is concentrated in Mr. Burr on the one side, there should be that same concentration on the other side. Because, neither acting by itself nor in co-operation on an inventory that is not allocated as to the cities, could the cities co-operate so that the co-operation would be of any effectiveness in the matter? Those are the things that have been running through my mind, that I hope may be worked out and as I know they can be. That is what I have been trying to get in my own mind, if I can, just what part any individual city can or should take in furthering this matter.

Commissioner Maullar: As Commissioner Poor stated a while ago, we have had something like forty cases of the Ohio Bell Company, with their valuations and so on submitted, and determination of such procedure seems very indefinite to the Commission. Now the other alternat--e is a total valuation and classification if it can be worked out. [fol. 1511] The hope of the Commission is that something of that sort can be done. Possibly the Commission and its engineers must assume their responsibilities, unless the cities themselves choose to combine their efforts and proceed to do that thing.

Mr. Dotson: May I suggest, Your Honors, before you adjourn, as I presume you are ready to adjourn, that the gentlemen here, since we are here together today—we take enough time after adjournment, and get together and dis-

cuss the matter a little among ourselves with reference to a further study and concerted action being taken with reference to the further procedure, and preparing ourselves to conduct ourselves with some degree of understanding.

Mr. Leach: It may well be, Your Honors and Mr. Dotson, that what I was talking about does not affect the Commission and Mr. Burr, but only these gentlemen; but nevertheless, it is a very serious problem that will have to be answered in some way.

Mr. Dotson: So that when we adjourn if you will just remain a few minutes——

Mr. Shuler: May I ask the Commission whether or not they have made any study or have any idea or any rough estimate of the amount of money that would be required to do this thing right from the standpoint of the State? My point is this, the State has taken away from the municipalities the right to do this thing, and if they are going to do it [fol. 1512] —now if they are going to do it, why they ought to do it right, or else give back to the cities the right to do it. Now has the Commission given any thought or study to form any idea as to that?

Commissioner Maullar: Mr. Shuler, if you had a job to do, the first thing you would want to try to do would be to try to find the fellow that you thought could do the job, wouldn't you?

Mr. Shuler: Well I would first find out how much money it would take to get the man that I wanted to get to do the job.

Commissioner Poor: Have to find the man before you could figure out how much it would cost.

Mr. Shuler: I would have an idea of the type of man.

Commissioner Maullar: The first thing is we have to determine what there is to do, and then the type of man next, at least, the man or the kind that we want to do it, and then we will know how much we have to pay him.

Mr. Shuler: What is actually meant is this; the legislature is going to meet shortly and I think we either ought to get together or get apart—and I think of course we ought to get together—and I think we ought to have some kind of an idea, when the legislature meets, as to what it is going to cost.

Commissioner Maullar: I think the Commission will be willing to indicate before very long about such an amount

that they might estimate that it will cost to make this [fol. 1513] investigation.

Mr. Shuler: I would like to have that——

Mr. Burr: May I make one suggestion in closing—and it goes to your suggestion, Mr. Shuler, one of the most important elements in determining the amount of money necessary for the Commission's investigation is involved in the check of the Company's inventory.

Mr. Shuler: Yes, I realize that.

Mr. Burr: And it seems to me that in undertaking to determine how much money is necessary or may be necessary, if any is necessary, at the same time it will be necessary to determine how far the Commission and you gentlemen think that the Company's inventory should be checked for example.

Mr. Shuler: That would depend on the man that those choose.

Mr. Dotson: He looks it over and decides.

Mr. Burr: For example, you can understand to adopt the counting of every pin on every cross arm and every pole—we have done that in many many cases, and this inventory which we have put in here is based on an original count of that sort, and we know how much it costs, and it is almost a prohibitive amount to spend, unless you feel that the Telephone Company is either wilfully or at least obviously wrong in the inventory it has made. I only throw that out here as a suggestion.

[fol. 1514] Mr. Shuler: I agree with that.

Mr. Burr: We have tried our best in times past to make a correct inventory and in every case, with the possible exception of a disagreement, not as to the number of poles, but as to the ownership of them——

Mr. Shuler: Well the big question again is to check them over quickly.

Mr. Burr: Well, will the Commission fix, with the approval of counsel, the dates for those two hearings?

Commissioner Poor: I was just going to ask you, Mr. Burr, what was your suggestion in regard to fixing a date for the hearing, and that has to do with the question of fair inventories.

Mr. Burr: Yes.

Commissioner Poor: Only.

Mr. Burr: Yes.

Commissioner Poor: Without having any reference to putting in testimony as to valuation?

Mr. Burr: Yes, because I think that we could consume at least two days in our effort to prove the correctness of this inventory and the method in which it was made.

Mr. Dotson: May I ask what provision will be made to supply the various communities interested in this inquiry with a copy of this inventory?

Mr. McConnaughey: Don't you have it?

[fol. 1515] Mr. Burr: It is about that big. Oh, we have got some copies for you; we have got some copies; but we could not attempt to supply every city solicitor and every municipality in the city; and if you can tell us where to repose those representative copies, we will be very glad to put them there.

Mr. Kennison: How many do you have, Mr. Burr?

Mr. Dotson: Well I presume after our conference here we may be able to evolve some question on that.

Mr. Burr: Well we have four copies that are available now besides those filed with the commission.

Commissioner Poor: And your further suggestion, Mr. Burr, was to set a date for the——

Commissioner Maullar: For the cross-examination.

Commissioner Poor: For the further inquiry into the reasonableness of the 4½ per cent contract. Now that hearing is up—you have offered all of your testimony——

Mr. Burr: Yes.

Commissioner Poor: That you have put in at the present time.

Mr. Burr: Yes.

Commissioner Poor: It is up to the cross-examination of those witnesses.

Mr. Burr: Yes, and Mr. Cox was definitely asked to come back. Also, it was stated that some cross-examination—some further cross-examination might be desirable of some of the other witnesses; anyhow Mr. Schneider and Mr. [fol. 1516] Kositzky.

Commissioner Poor: Now in setting down any dates to cause us to test the accuracy of the inventory—that is a matter that can be reasonably ascertained as to the time that is required. Of course, in setting aside the time for this cross-examination of these witnesses, I think that the

commission would like to have some expression from counsel as to who they want to cross-examine.

Mr. McConnaughey: Now by the way—the Commission may know on its calendar—that fare case is going to be settled and dismissed, so that you will have those three days available that you granted to us.

Commissioner Poor: That fare case will be dismissed.

Mr. McConnaughey: Yes.

Mr. Dotson: In this connection I would like to inquire from Mr. Burr whether you care to go on and finish your cross-examination of Mr. Snook. We are in the midst of that.

Mr. Burr: I don't know; I will have to look up the record, Mr. Dotson.

Mr. Dotson: Very well; if you do not intend to we will relieve his mind of any further examination.

Commissioner Mauller: About what date, gentlemen, would you want for the continuation or the submission of this inventory and valuation?

Mr. Dotson: What date have you available?

[fol. 1517] Commissioner Maullar: And for the examination in the 4½ per cent case—what was the date we gave you?

Mr. McConnaughey: 19th and 20th, I believe—19th and 20th.

Commissioner Maullar: What day of the week?

Mr. McConnaughey: Monday and Tuesday.

Mr. Dotson: That is in January.

Mr. Shuler: That is the fare?

Commissioner Maullar: How would the 19th at 1:30 suit you?

Mr. Burr: January 19th?

Mr. Dotson: That is on Monday.

Commissioner Maullar: Monday, January 19th.

Mr. Dotson: That is all right.

Mr. McConnaughey: For what?

Commissioner Maullar: For the testing.

Commissioner Poor: Not the inventory.

Mr. Burr: And the 20th.

Commissioner Maullar: Yes; 19th and 20th.

Mr. McConnaughey: No cross-examination on the 4½ per cent at that time?

A Voice: No.

Commissioner Poor: Now about how much time do you

want for the cross-examination? You better be looking ahead and fixing the dates, because the Commission is just jammed up with bus cases and things of that kind you know and fixing dates for hearing cases ahead.

[fol. 1518] Mr. Dotson: We will let you know then sometime, perhaps after this meeting today, we can let you know.

Commissioner Maullar: All right; determi that sometime following this.

Commissioner Poor: We will set a definite time.

Mr. Dotson: Have you any date preceding the 19th and 20th that will be available?

Commissioner Poor: I would not know without looking at the calendar; we haven't in this calendar before us.

Mr. Dotson: Well we will figure on a day and let you know.

Commissioner Poor. We will fix definitely now January 19th and 20th as the dates for that.

Mr. Dotson: Two days.

Commissioner Poor: For the inventory.

Mr. Burr: We will take all of that.

Mr. Dotson: Yes. I suppose so.

Mr. Burr: I want to try and convince you people that we are right.

Mr. McConnaughey: Sure. Also, you will have copies available of the inventory?

Mr. Burr: There are four copies I just stated. We will dig up as many as we can.

Mr. McConnaughey: Four copies you mean for all of us that would be?

Mr. Burr: Yes.

[fol. 1519] Mr. Shuler: Why can't you let some of them have those right away, Mr. Burr?

Mr. Burr: Yes; just as soon as you tell us where.

Mr. Hagelbarger: Well so far as Akron is concerned you may give any group of attorneys who appeared on the 4½ per cent. We won't object if we can borrow copies from any of our half dozen of attorneys.

Mr. Shuler: We will name Mr. Dotson and Mr. McConnaughey.

Mr. Dotson: And Mr. Shuler.

Mr. Shuler: I don't think you better bother me; I have no experts to go over it. Let those who have experts go over it.

Commissioner Maullar: Mr. Dotson and Mr. McConnaughey.

Mr. Shuler: Mr. Hagelbarger and myself.

Mr. Burr: All right.

Commissioner Maullar: All right, gentlemen; if that is all, we will adjourn this meeting.

And thereupon the further hearing of this matter was adjourned until Monday afternoon, January 19th, 1925, at 1:30 P. M.

[fol. 1520] Before the Public Utilities Commission of Ohio

No. 3307

In the Matter of the Investigation and Inquiry of the Public Utilities Commission of Ohio, Upon Its Own Motion, for the Determination: (a) of the Fair Value of the Property of the Ohio Bell Telephone Company, Toll and Exchange, (b) of the Just and Reasonable Rate; and (c) of the Reasonable Rules and Regulations for Service Furnished by Said Company to Its Patrons Throughout the State of Ohio

Proceedings and Testimony Before Honorable Geo. T. Poor and Honorable Frank B. Marshall, Public Utilities Commissioners, Beginning on the 19th Day of January, 1925

Present:

Karl E. Burr and Charles S. Maltby, counsel on behalf of the Ohio Bell Telephone Company;

Frank M. Dotson, counsel on behalf of the City of Toledo;

W. S. McConnaughey, counsel on behalf of the city of Dayton;

Karl F. Shuler, counsel on behalf of the city of Cleveland;

Charles A. Leach, counsel on behalf of the city of Columbus;

Henry M. Hagelbarger, counsel on behalf of the City of [fol. 1521] Akron;

J. F. Kinnison, counsel on behalf of the City of Canton;

William E. Lewis, counsel on behalf of the City of Youngstown;

G. W. Wilmer, counsel on behalf of the City of Middletown;

C. H. Drinkle, counsel on behalf of the city of Lancaster;
W. W. Giffen, counsel on behalf of the city of Niles;
John J. Boyle, counsel on behalf of the city of Hubbard;
George W. Berry, counsel on behalf of the city of Piqua.

Be It Remembered, That on the hearing of the above entitled matter, before the Public Utilities Commission of Ohio, the Ohio Bell Telephone Company, to maintain the issues on its part to be maintained, offered and introduced in testimony on its behalf, the following evidence towit:

[fol. 1522] Monday Afternoon

January 19th, 1925, 1:30 o'clock.

Commissioner Poor: The matter set for hearing this afternoon is the matter or proving in the inventory of the Ohio Bell Telephone Company in case No. 3307. If you will all just give your appearances to the reporter, you may then proceed.

Mr. Burr: Your Honors, our understanding of the procedure is that Mr. Williams is to take the stand today and testify as to the inventory of the property of the Ohio Bell Company, which was filed with the Commission on December 1st, last. His testimony will be followed by that of Mr. Schneider, who will also testify to the inventory in certain respects.

Mr. Williams may be sworn and take the stand.

[fol. 1523] George B. Williams, called as a witness on behalf of the Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You may state your name.
A. George B. Williams.
Q. Where do you live?
A. Columbus, Ohio.
Q. What is your occupation?
A. Appraisal engineer for the Ohio Bell Telephone Company.
Q. How long have you occupied that position?
A. For the present and the former Ohio Bell Telephone Company, since January 1st, 1921.

Q. Prior to that time what was your experience in the telephone business and in kindred occupations?

A. I have been engaged in telephone work and in work in other public utility lines similar to telephone work in many of the engineering and accounting aspects, for the last fifteen or sixteen years.

The first two years of that time was during the time that I was employed in the office of the General Auditor of the Hocking Valley Railroad Company, beginning in the summer of 1909. In that work, in addition to general accounting work, I assisted in the preparation of the statistical data and information relative to the regular annual reports for the balance sheets, profit and loss statements, and operating expense and revenue statements, and in the statistical information and data for the annual reports to the Interstate Commerce Commission, the Public Utilities Commis-
[fol. 1524] sion and the Tax Commission of Ohio. I also had some experience during that period in the preparation of annual rates and charges for depreciation for railroad equipment.

During the next three years I was employed in the office of the Chief Engineer of the Hocking Valley Railroad Company, engaged in both engineering and accounting work. The engineering work consisted of such work as the preparation of estimates for construction work, similar to the estimates prepared by telephone companies for construction work, and the accounting consisted in handling the payrolls and payroll distribution reports, various material accounts, and in the preparation of statistical information for expense statements and for the annual reports to the Public Utilities Commission and the Interstate Commerce Commission and the Tax Commission of Ohio.

During this period I also had experience in inventory work, having charge of the inventory of maintenance of way material for the Toledo division.

In the summer of 1914 I entered the employ of the State of Ohio as an appraisal clerk——

Q. Just a moment, Mr. Williams. You speak of the Toledo Division. The Toledo Division of what, if you please?

A. The Hocking Valley Railroad Company.

Q. Now, proceed.

A. During the summer of 1914 I entered the employ of

the State of Ohio as an appraisal clerk in the telephone department of the Public Utilities Commission of Ohio, and remained in that position for the next two years.

[fol. 1525] My work in this position consisted of both field and office inventory and appraisal work. The field work consisted in identifying, counting, listing and measuring telephone plant in the field, and the determination of the proper amount of deterioration or depreciation in each of the items of the plant. The office work consisted of the summarizing of inventories, assistant in the preparation of unit costs, the application of those unit costs and the compilation of the appraisals.

In the first part of 1915 I was called to Columbus and placed in charge, under the Telephone Expert of the summarizing of appraisals, the application of unit costs, and the compilation of the inventories and appraisals.

1914 was the beginning of telephone inventory and appraisal work in the State of Ohio. Up until that time there had never been made in the state by the Public Utilities Commission a complete inventory and appraisal of telephone property and a public hearing held in regard to such inventory and valuation. I am mentioning this fact at this point simply because the beginning of my own telephone experience coincides with the establishment and organization of the telephone department of this Commission.

In 1916 I was transferred to the position of appraisal engineer in the telephone department of the Public Utilities Commission. My duties in this position were those of a supervisory capacity under the telephone expert, having charge of the summarizing of inventories, the application of unit costs, and the compilation of the appraisals. During [fol. 1526] this time I assisted the telephone expert in making studies of engineering authorities, such as Hayes, Whitten and Floy, and such court and Commission decisions as were obtainable, in order to determine the proper amount of construction overhead costs, working capital and cost of attaching business, to be included in the valuation of telephone properties to be recommended to the Commission for the fixing of the final values.

Some of the inventories upon which I did field work and office work during this period were those of the Cleveland Telephone Company, the Ohio State Telephone Company, the Elyria Telephone Company, the Lima Telephone & Tele-

graph Company, the Galion Telephone Company and the exchanges of the Chesapeake and Potomac Telephone Company and independent companies in Steubenville, Mingo Junction, Bellaire, Bridgeport, St. Clairsville, Fairport, Barnesville, Marietta and others.

During this period I also checked revenue and expense statements submitted by telephone companies in substantiation of their applications for rate schedules. These checks involved the checking of the various items submitted by the telephone companies to the ledgers and journals of these companies and back through the payrolls, payroll distribution reports, time and labor summaries, material summaries, material disbursement, reports, and bills and vouchers. Some of the jobs so checked were those of the Cleveland Telephone Company, the Ohio State Telephone Company, the Central Union Telephone Company, the Lima [fol. 1527] Telephone & Telegraph Company, the Elyria Telephone Company and a considerable number of others.

I also at this time checked statements and additions and betterments and deductions to telephone properties offered by telephone companies in substantiation of applications for security issues in the State of Ohio. The details of these checks were similar to those that I have already discussed for the revenues and expenses. Some of the companies checked in this manner were the Cleveland Telephone Company, the Ohio State Telephone Company, the Cincinnati & Suburban Bell Telephone Company, the Newark Telephone Company, the Warren-Niles Telephone Company, the Lima Telephone & Telegraph Company, the Citizens Telephone Company of Circleville, and a considerable number of others, involving in the neighborhood of 20 or 25 million dollars in security issues.

In these applications for security issues the check of the company's books and records was made for the purpose of recommendations by the telephone expert to the Commission in regard to the proper procedure in allowing or disallowing the applications for these security issues.

In 1918 I was transferred to the position of assistant to the Telephone Expert. My work in this position was similar to that already described at the time I was working in the capacity of an appraisal engineer, and consisted of the supervision, under the Telephone Expert, of the preparation of appraisals, checking of revenue and expense accounts,

and statements of additions and betterments for security issues, and the preparation of rate schedules.

[fol. 1528] On the 1st of July, 1919, I accepted the position of appraisal engineer for the Central Union Telephone Company, Ohio Division. The extent of the territory covered by my work in this position was all of the Central Union Telephone Company within the State of Ohio, or in other words, all of the State of Ohio excepting Cuyahoga and Hamilton Counties, and some twelve or thirteen counties along the eastern border of the State, which were still operated at that time by the Chesapeake a Potomac Company.

My duties as appraisal engineer of the Central Union Telephone Company, consisted in the supervision of making of field inventories, the office work consisting of the summarizing of inventories, the determination of the proper unit costs to apply to the different items of plant, the summarizing of those appraisals, and the application of proper construction overhead costs. It also covered the analysis of construction records, for the purpose of additions and betterments, and the analysis necessary to determine labor costs, plant supervision, tool and supply expense, and the construction overhead costs.

I remained in this position until January 1st, 1921, when the property of the Central Union was sold to the former Ohio Bell Telephone Company.

At that time I became appraisal engineer of the former Ohio Bell Telephone Company. I remained in that position until the 1st day of September, 1921, when the present Ohio Bell Telephone Company was organized, and I became appraisal engineer with the present company, and [fol. 1529] have remained in that position until the present time.

My work with the Ohio Bell Telephone Company was similar to that with the Central Union Telephone Company, and in addition, the following work:

When the Central Union Telephone Company property was sold to the Ohio Bell Telephone Company, it was necessary to distribute the purchase price, amounting to some 24 million dollars, to the various codes and accounts. This necessitated the assembling of the inventory of the entire Central Union Telephone Company, Ohio Division, pricing out this inventory, and distributing the purchase

price on the basis of the structural values. This work was done under my supervision and direction.

Also, when the Ohio State Telephone Company came into the present Ohio Bell Telephone Company merger, it came in with an undistributed construction account item of some $17,000,000. It was necesary to allocate or distribute this undistributed item to the various accounts and codes, which was done under my direction and supervision, in a manner similar to that already described for the distribution of the purchase price of the Central Union Telephone Company. Also, when the Chesapeake & Potomac Telephone Company was purchased by the Ohio Bell Telephone Company, there existed a figure of some $500,000, for which it was necessary to make distribution to the proper codes and accounts. This was done on the basis of appraised values and under my direction and supervision. It was also my duty to prepare bills of sale and accounting reports in connection with [fol. 1530] the proposed purchase, in accordance with our accounting system, and to comply with the provisions of the uniform system of accounting.

I also prepare the retirement unit costs, by which the company retires its property in accordance with the uniform system of accounts. This work involves several weeks' time at the end of every year, and an analysis of the additions and deductions for the various accounts for the entire preceding year, both in money values and in measurements, in order to satisfy ourselves as to the accuracy of the figures involved. I also prepare and there is prepared under my supervision, the inventories and appraisals of private branch exchange equipment, sold at different times to large manufacturing concerns.

I also prepare and there is prepared under my supervision the appraisals of property retired in connection with unifications.

I also have charge of the preparation of statistical data, in the form of plant measurements, which are included in the annual reports to the Public Utilities Commission, the Interstate Commerce Commission, and the Tax Commission of Ohio.

In connection with the preparations of inventories and appraisals, it is necessary to study price levels and trends and statistical data and economic factors, to take into

consideration the probable trends and levels through these different years in the future.

The amount of work in connection with telephone inventories and appraisals in which I participated during the time that I was with the Public Utilities Commission would [fol. 1531] aggregate between 25 and 30 millions of dollars. The amount of inventories and appraisals work done under my supervision since I have been with the Central Union Telephone Company and the Ohio Bell Telephone Company would aggregate in excess of $150,000,000.

In connection with the amount of work involved in this inventory, I have prepared two maps setting forth the distribution and extent of the property.

Mr. Burr: The first map, to which Mr. Williams refers, may be marked Williams' Exhibit No. 1, and if I correctly understand it, it shows the exchanges of the Ohio Bell Telephone Company, and also the points at which that Company owns equipment, but does not maintain exchanges.

Q. That is true, is it not, Mr. Williams?

A. That is true.

Mr. Burr: We offer Williams' Exhibit No. 1 in evidence.

And thereupon the map above referred to was marked for the purposes of identification as Williams' Exhibit No. 1, and was offered and admitted in evidence on behalf of the Ohio Bell Telephone Company, and is herewith submitted and made a part hereof.

Q. Explain the map and its code a little more fully please.

A. The map shows a code, indicating the points at which the Ohio Bell Telephone Company owns equipment and toll stations. The points at which the company owns exchanges is indicated by a solid block circle. The equip- [fol. 1532] ment in these exchanges consists of the regular subscribers' and trunk switchboards and the associated equipment. The points at which the Ohio Bell Telephone Company owns equipment and telephone stations but does not own exchanges are indicated by a hollow black circle. The equipment at which the Ohio Bell Telephone Company does not maintain exchanges consists of toll boards, test panels, dialing equipment, protectors and such items.

The Ohio Bell Telephone Company maintains exchanges

at 156 different points. It has equipment and toll stations at 201 other points. Making a total of 357 points in the State of Ohio where the Ohio Bell Telephone Company either maintains exchanges or has equipment and toll stations.

In addition to these municipalities in which the company has equipment and toll stations, it, of course, owns property connecting these and other stations throughout the State of Ohio, which is indicated on the next map.

Mr. Burr: The second map may be marked for identification Williams' Exhibit No. 2.

And thereupon the map above referred to was marked for the purposes of identification as Williams' Exhibit No. 2.

Q. And, as I understand it, shows the toll routes of the Ohio Bell Telephone Company in the State of Ohio. Is that correct, Mr. Williams?

A. That is true.

Mr. Burr: Williams' Exhibit No. 2 is offered in evidence [fol. 1533] and I am going to ask Mr. Williams to explain it a little further.

And thereupon the map above referred to was offered and admitted in evidence on behalf of the Ohio Bell Telephone Company, and is herewith submitted, marked Williams' Exhibit No. 2, and made a part hereof.

The Witness: This map indicates the toll routes owned by the Ohio Bell Telephone Company. There is a code in the lower righthand corner of the sheet, showing the meaning of the different kinds of lines indicated on this map. The solid black lines—the solid white lines indicate toll lines owned entirely by the Ohio Bell Telephone Company. The dash-and-dot lines indicate toll pole lines owned jointly by the Ohio Bell Telephone Company and other Companies.

The broken-dash line indicates toll wires of the Ohio Bell Telephone Company on other companies' poles.

Reducing the jointly owned poles to terms of fully owned poles, the Ohio Bell Telephone Company has somewhat in excess of 240,000 toll poles in the State of Ohio, as of June 30th, 1924. And taking an average of 40 poles to the

mile, gives over 1,000 miles of toll pole lines which the company owned in the State of Ohio, as of June 30th, 1924.

On these pole lines and on the pole lines of other companies, the Ohio Bell Telephone Company owned as of June 30, 1924, over 80,000 miles of toll aerial wire.

Mr. Shuler: I object to that. Now, he is going into the substance of the inventory, testifying positively that there are so many miles of aerial wire. I thought up to this mo-
[fol. 1534] ment he was simply qualifying. Now he is beginning to testify absolutely as to the inventory.

Mr. Burr: That is the purpose of this hearing.

Mr. Shuler: Sure it is, but before he testifies to the inventory, I should like to ask some questions first, in order to determine whether this man is a competent witness to so testify.

Commissioner Poor: You mean you want to ask him some questions on his qualification?

Mr. Shuler: Not as an expert appraiser, but as to his qualifications to testify as to this particular inventory.

The Witness: I have testimony which will follow this, indicating just how this was taken.

Mr. Shuler: That is what I want first.

The Witness: And what part I had in it.

Mr. Shuler. That is what I would like to have first, so as to know whether his evidence is competent at all on this particular inventory.

Commissioner Poor: Strictly speaking, the objection would be well taken at this time.

Q. Mr. Williams, will you omit at this time any statement of the extent or amount of the toll property and proceed with the balance of your answer?

A. I would like first in that connection to give my definition of an inventory.

Q. You are now addressing yourself to the inventory proper?

A. I am.

Q. Proceed.

A. An inventory, as the term is used relative to this telephone property, is a statement, usually in summary [fol. 1535] form or by totals and in some detail, of the quantities or numbers of items constituting a property.

First, on the effort that was made to produce a correct inventory, I would like to call attention to the number of

men and the amount of time consumed in this work. I will state that these men were employed under my supervision and direction.

An analysis of time and work records indicate that the field forces fluctuated between a minimum and maximum of five men and 60 men, depending on time, weather and other factors; and that the office force fluctuated between a minimum and a maximum of eight and twenty men.

A summary of the total time consumed shows for direct labor, exclusive of my own time, 25,951 man days in the preparation of this inventory.

In addition to this time of the men, there were about 2,000 days of motor vehicle time used in this work.

I also might mention in connection with this that there were several thousand dollars of overtime put in on this inventory, for which the men did not receive any overtime payment.

Of course, most of the time put in on this inventory was put in prior to the issuance of the Commission's order on October 14th, 1924 and covered a period of from four to five years, as will be explained later.

The various inventories which were incorporated into this inventory as of June 30th, were originally prepared for purchases and sales, rate cases and for record purposes. [fol. 1536] As reflecting on the way the inventory was made and the qualifications of the men who were working under my supervision in taking this inventory, I would like to state, first, that all of the men who were employed in this work under my supervision were men experienced in telephone work. The man who was in charge directly of the field work under my supervision was a man who has had 24½ years' experience in telephone work, of which 13 years has been in inventory and appraisal work. The man who was in charge of the office work under my supervision has had 19½ years of experience in telephone work, of which 12½ years have been in inventory work. The man who is in charge of central office and private branch exchange work is a man who has had 41 years' experience in telephone work, of which three years was in inventory and appraisal. These men have been construction foremen, plant inspectors, equipment engineers, architectural engineers, assistant appraisal engineers, and occupied over positions in the telephone work. In addition, many of the men, besides

these men in supervisory capacities, have had from five to twenty five years' experience in telephone work. In the taking of this inventory and the various toll and exchange inventories which are incorporated into this inventory, the field foremen on each large job, and frequently the men themselves, were brought into the Columbus office and instructed in the way the inventories were to be taken, in which detail they were to be taken, the amount of time to be consumed, how thoroughly, and the various other factors involved.

Also, I frequently went out on to the job, checked the [fol. 1537] work that the men were doing, satisfied myself that the work was being done in accordance with the instructions that I issued for that purpose.

In addition, I have constantly supervised and directed the office work. This work is done in my own office by myself and by men working directly under my supervision.

This inventory is the joint product of all of our efforts. I also keep in touch with the field men by correspondence.

Q. You say you keep in touch with them?

A. Yes.

Q. What did you do in the case of this particular inventory?

A. I did and always do and have on all of the inventories which are incorporated into this inventory, get in touch with the field men, in addition to going out and checking on the job personally, by correspondence and by telephone conversations.

Also, in connection with the inventory of the toll property, each field man was supplied with a field form, printed on the back of a postcard, which form or report was mailed into the Columbus office at the end of each day, indicating number of poles taken by that man during that day, the beginning pole number and the ending pole number, between what towns, weather conditions, and his location for the next day. Each man on the toll work was also required to report by telephone at least once a week, in addition to the daily reports.

It has never been my policy in the taking of field inventories to unreservedly accept the work of the field men. The [fol. 1538] plan has been in effect after the day's work is done by the men and they have turned in their data sheets, to have a special set of men, who take these data sheets

and maps and spot-check the work of these men in various localities, in order to determine its accuracy. The men, of course, knew that these checks were going on, and I believe it puts them on their mettle and made for greater accuracy in the work. Other checks were made during the progress of the inventory, which I would like to discuss later in connection with a set of field and office forms, if there is no objection at this time, indicating exactly how the work was done.

Q. Do you refer to the compilation of twelve forms, which, for the purposes of identification, may be marked Williams' Exhibit No. 4?

A. Yes, sir.

And thereupon the compilation of forms above referred was marked for the purposes of identification Williams' Exhibit No. 4, consisting of twelve sheets.

Mr. Dotson: Before you proceed further, I want to inquire, as a matter of information, the terms of the order of the Commission made when this inventory was directed to be prepared. Is it not a fact that the order directed as of what date this inventory should be prepared?

Commissioner Poor: I think the order will speak for itself, Mr. Dotson.

Mr. Dotson: My recollection is that it was December 1st, 1924. The inventory testified to by Mr. Williams is brought [fol. 1539] to June 30th, 1924.

Mr. Burr: Of course, it would have been impossible to have compiled an inventory as of December 1st, 1924, because that was the date on which the inventory was required to be filed with the Commission. The Commission's order itself, Mr. Dotson, was silent as to the date as of which the inventory was to be made.

Mr. Dotson: That is just what I was inquiring about.

Mr. Burr: I think Mr. Williams will bear me out when I say that we made the inventory as of the latest date possible, that is, the latest date possible to be still laid within the rule of the Commission requiring the filing as of December 1st.

Q. Isn't that true, Mr. Williams?

A. That is true.

Mr. Burr: I have a copy of the order, if anyone cares to see it.

The Witness: My understanding is that there is no specified date in the order as of which the inventory was to be made.

Commissioner Poor: As I recall it that is correct. But the Commission did order that the inventory should be filed not later than December 1st.

Mr. Dotson: I have not a copy of it here, but it was in my mind that the Commission did fix a date. That is what I want to clear up.

Mr. McConnaughey: No, I don't think so.

Mr. Shuler: The date on which it was to be filed.

Mr. Burr: I assume that the Commission's order is a [fol. 1540] part of the record in this case.

Commissioner Poor: It should be, yes.

Mr. Burr: Then we won't take the time to read the order into the record?

Mr. Shuler: Oh no, that is not necessary.

Mr. Burr: I just read it for myself, however, and it merely provides that the inventory shall be filed on or before the first of December, 1924, without specifying the date as of which it shall be taken.

Mr. McConnaughey: It would be a matter of comparatively small size, a job of small size, to bring it down to any date after June 30th, I assume, if that was desired?

The Witness: Yes, that is, in comparison with the original job, that is true. We can do that probably at later dates.

Mr. McConnaughey: If it is required.

Mr. Shuler: Yes, if it is required.

Mr. Burr: We will do that from time to time as we go along, unless something unforeseen happens to prevent it. That has been our plan at all events.

(Record read.)

Mr. McConnaughey: Mr. Burr, before you leave these maps—were you through with that?—there is just one question I would like to ask. The black line that appears opposite each one of these points——

The Witness: That underscores the name of the point.

Mr. McConnaughey: That simply underscores the name of the point, doesn't it?

[fol. 1541] The Witness: Yes, sir.

Mr. McConnaughey: It does not indicate anything as to wires or anything like that?

The Witness: No.

Mr. Burr: You are now referring to Exhibit No. 1?

Mr. McConnaughey: Yes. But there are other lines there that indicate wires, I suppose?

The Witness: No, not on that map. No, those are railroads, roads or rivers, I think. Nothing but the exchanges and the municipalities are indicated on that map.

Mr. McConnaughey: No marks indicate anything here excepting the solid dot and circle.

The Witness: Yes.

Mr. McConnaughey: I see. All right.

The Witness: Since dates have been mentioned in connection with the inventory, I would like to call attention to the fact that all of the inventory as it occurs in what will be designated as Williams' Exhibit No. 3, was taken and brought up to June 30, 1924, with the exception of certain accounts, upon which we keep no running record of plant items or quantities, and those accounts were all taken as of October 31, 1924, and as I come to them in the inventory, I will indicate which accounts they are, and how the inventory was taken on those.

In connection with the field inventory, we have first, record maps that indicate the location and quantities of property in the various classes as of some previous date. These are our starting points and our starting record.

[fol. 1542] Q. For what purpose?

A. As far as this inventory is concerned.

Q. Very well.

A. These maps are taken out into the field and corrected by the field men, in addition to the listing that they make on data sheets, indicating both on the data sheets and on the maps the corrected condition or the existence of the property as of the particular date as of which the field inventory is taken. These maps, or, as we call them, plates, are generally several in number for each exchange, that is, a number of these maps taken together cover the exchange area, and they are split up into sections, the whole town, or into maps or plates as we call them, and each one of those plates or maps indicate the property in that particular section.

In addition, there are sets of these maps not only for pole

lines but for aerial cable, and a separate set for underground cable and a separate set for underground conduit.

In practice, for instance, on pole lines each two men are given a plate or map, having a certain plate number, and covering a certain territory within the exchange that is being inventoried. They are also supplied with data sheets similar to those in Exhibit No. 4. For instance, they list poles and wire similar to sheet No. 1 of Exhibit No. 4.

Q. Just a moment, Mr. Williams. You have been interrupted twice in your attempt to identify Williams Exhibit No. 4. Now, as I understand you, in referring to the Exhibit of that number, you are referring to the twelve sheets which have been bound together and marked for identifica-
[fol. 1543] tion Williams' Exhibit No. 4?

A. That is right.

Mr. Burr: We offer in evidence Williams' Exhibit No. 4.

And thereupon the twelve sheets above referred to were offered and admitted in evidence on behalf of the Ohio Bell Telephone Company, and are herewith submitted, marked Williams' Exhibit No. 4, and made a part hereof.

Mr. Dotson: Mr. Burr, I do not believe Mr. Williams has identified his Exhibit No. 3. I have not heard of it.

Mr. Burr: He has not yet. He has referred to it.

The Witness: These Exhibits are so interwoven in their use that it is hard to identify them all as we go along.

Mr. Dotson: I did not know but what you wanted to.

The Witness: Not right yet. When the men start out, provided with this section map and their data sheets the first pole that they approach is pole No. 1. One of the men marks the pole itself as being pole No. 1. The other man marks on the first line of the form similar to sheet 1 of Exhibit No. 4, pole No. 1. Now, the section map has also got a number. Let us say that for the territory covering the first pole that is approached that this map is indicated as Map No. 1. The man who marks the pole number on the pole with a piece of waterproof crayon chalk marked No. 1, which is the pole number, draws under it a horizontal line, and puts No. 1 under that, which indicates that that is pole No. 1 on map No. 1. This marking is done on the
[fol. 1544] side of the pole next to the street or the road and about four feet above the ground. The pole number, the first one that is approached, is also marked pole No. 1

on the map. Also, as I have stated, this pole number is indicated as being pole No. 1 on the first line of the data sheet. Now, we have all three of them marked with the same indication, the map, which has the plate or map No. 1, and on it the first pole No. 1; the pole itself, which is indicated by pole No. 1 over the horizontal line, underneath which is the map No. 1; on the data sheet we have in the upper righthand corner the section or map No. 1, and on the first line the pole No. 1. They are all three marked with the same pole identification and map number, so that it can be associated and checked at any time after the field data is taken.

One of the men proceeds to call the kind of pole, timber, height, class, crossarms, number of cross-arms and kind of crossarms, number and kind of anchors and guys, brackets, wires and drops on the pole, and the other man sets them down opposite this pole No. 1 on that first line of the data sheet.

The men check each other with regard to these various items, to see that they agree in the matter of judgment as to what constitutes the different items. Sometimes they have disputes. For instance, one man may indicate that this kind of a drop is a No. 17 copper clad twist drop. Another man in his judgment says it is not a copper clad drop, but a pure copper drop.

Q. Have you seen these things in your experience?

[fol. 1545] A. I have, and I have had the same experience personally. The usual result is that one or the other of the men goes up the pole and scrap-s off the insulation and the metal to find out whether it is a copper clad drop or whether it is pure copper drop.

In this way the men proceed from one pole to another, taking the poles, indicating the pole number on the pole, on the map, and on the data sheets, and the various associated items for each pole.

The next step, when the maps and data sheets are brought back into the office, is this spot check I have already referred to, by a special set of men, whose duty it is to make that sort of check.

After this, the next step is that of a check of every pole indicated on the map, with the accompanying data sheets. As I stated before, this is possible on account of the numbering system applied to the poles on the map and

the corresponding numbers on the data sheet. In this way we are able to catch discrepancies, where a pole or anchor may be shown on the map and not shown on the data sheets, or the reverse.

The data sheets and the maps are both then sent into the Columbus office where the different items are summarized by totals off of the data sheets. And at the same time we make another check between the maps and the data sheets, so that if there are any discrepancies made in the field check, we stand a chance of catching them in the office. In case there are any such they are sent back to the field for recheck.

Q. Will you refer to the different sheets in your Exhibit [fol. 1546] No. 4 and explain each one briefly?

A. Yes, sheet No. 2 of Exhibit No. 4 is a rural field pole and wire listing form. The first sheet was for city pole and wire listing. The difference is that, owing to the greater uniformity of poles and wire and the fewer changes in rural districts, we take the poles and wire by groups, rather than each individual pole number. Pole numbers are then assigned to the rural maps and to the rural data sheets for the beginning and ending of the different leads of poles or where the branch leads break off or at the end of these branch leads or at railroad crossings or at county lines and township lines and such places as that. The rural poles and wire are summarized then similarly to that indicated for city poles and wire.

The rural pole maps that were used in this connection were United States Topographical maps, showing the route of the rural pole line along the paved roads and where the branches take off, and various other items of that kind.

Q. What are the account numbers appearing near the top of sheet No. 2?

A. Account numbers are accounts 241, which is exchange pole lines, account 251, which is toll pole lines, account 243, which is exchange aerial wire, and account 253, which is toll aerial wire, all of which are taken, as I say, for the rural districts on this particular kind of a form.

Q. What is sheet No. 3?

A. The office summarizing which I spoke of for the pole lines is done on sheets or forms similar to 3, 4, 5 and 6 of Exhibit No. 4, covering the poles and the associated pole equipment and the wire. These are the forms that were used in the office for this summarizing.

[fol. 1547] Q. Sheet No. 7 is what?

A. Sheet No. 7 is a form similar to that used for that field inventorying of aerial cable. This inventorying is done similar to that described for the pole lines, in that we have maps indicating the location, size and the various other items in connection with cable, and at the same time that the cable is taken in the field, it is listed on forms, similar to this form No. 7. This shows the length, size and gauge of cable, the length and kind of messenger supporting the cable, the extra messenger, the potheads, terminal connections, bridles, and various items in connection with aerial cable plant.

Q. Sheet No. 8 is used for the purpose of summarizing the same material, is it not?

A. It is. Also sheet No. 12 is used in connection with terminals, the summarizing of terminals, requiring a considerable amount of information. I would like *to* also to say, in connection with the field inventorying of exchange and toll aerial and underground cables, that every foot of cable shown in this inventory, with the exception of that added since the field inventory dates, was actually walked and measured, according to the best knowledge and information, and according to the instructions given by me for that purpose.

Mr. Shuler: I object and move that that be stricken out. He did not do it. Somebody else did. How can he testify that it was actually walked off, when he did not know it.

Commissioner Poor: He cannot testify that the actual poles were down there, but he has testified that this was down- under his actual supervision.

[fol. 1548] Mr. Shuler: But he says every foot of these wires was walked off, measured by being walked off. He could not have walked it off if he had had 27,000 man days. He can say if he pleases that he instructed these men to do it, but he cannot say that these men did it according to his instructions.

Commissioner Poor: I think he has sufficiently qualified that.

Mr. Shuler: Note an exception.

Q. What is sheet No. 9?

A. Sheets 9 and 10 cover the listing of underground conduit, manholes and underground cable.

On sheet No. 9 is shown a conventional elevation sketch of

a manhole in the upper righthand corner, and also a plan of the particular manhole or the specific manhole below.

You will note that on sheet No. 9 the kind of cover, the size of the cover, is the first thing indicated for this particular manhole, showing a thirty inch cover.

Now, the arrow, pointing to the right, indicates a duct run or trench run of conduit, going in that direction. You will also note just above that the information shown on the righthand side indicates that this is a four-duct multiple tile run of conduit. This is further shown in the specific manhole sketched down below, where you will see four ducts indicated by four rings on the righthand side of the manhole. Also you will note in the conventional sketch at the top of the page that the top of the duct run is indicated as being [fol. 1549] 23 inches under the pavement, that the conduit itself is nine inches deep, and that from the bottom of the conduit to the bottom of the manhole is a distance of 23 inches.

In the sketch of this particular manhole below, there are indicated three separate cables; first, the black line, beginning at duct No. 12 on the right and running around to the upper lefthand corner to the two ducts marked A, is a 400 pair Central Union or Bell cable. This particular sketch of a manhole and this information on the underground conduit was taken on the Akron property when we were taking the Central Union property only, that is, prior to the time that we took the Ohio State property, so that we took the Bell property separate from the Ohio State. The State cable is indicated by the yellow line running from the righthand side down to the lower lefthand side to one of the laterals marked B. The red line running through the upper portion of the manhole is a city cable.

The measurements of the manhole are indicated, showing that from the center of the manhole cover to the righthand side of the manhole is 46 inches; to the left side is 34 inches; and to the upper and lower part of the drawing 23 to 25 inches. Also, measurements are taken from the center of the manhole to the face of the lateral ducts, shown on this map as 30 inch measurements for each one of them.

In the upper lefthand corner is some more information relative to the manhole. This indicates that there is one manhole, with brick wall construction, having a concrete [fol. 1550] bottom. It has also an eight inch by two foot sewer tile sump drain. It has four six-hole number 1 Cen-

tral Union cable racks, and four single No. 1, Central Union cable hooks. The number of bolts is given. The number of lead cable shields and the number of wood conduit plugs.

If you will turn over the two sheets connected with this No. 9—it is a double sheet—you will see on the back another sketch, giving the information for the lateral runs and the cable in those lateral runs.

One of the lateral runs is shown going to No. 8, and if you will look in the upper righthand corner, it will indicate that the information for No. 8 is given under that particular number. This shows the iron pipe riser and the cap, the number of pipe hooks, the reducer, the coupling, the bend; also the amount of cable going to each one of the terminals. It indicates that there are two terminals, one a 200 pair F. X. terminal, and the equipment and protection in one of these terminals. The measurements for the laterals are given over in the sketch in the middle of the page.

In this way the information is taken for the manhole, conduit leading out of the manhole, whether main or subsidiary, the kind, size, gauge and length of cables, both for main and subsidiary, the number and kind of terminals and their construction and all of the various associated equipment in regard to the manhole, the cable and the terminals.

On sheet No. 1 we summarize the various information concerning the manholes. This summarizes for all manholes the kind of construction for walls and for bottom, the different measurements, the number of racks, hooks, lead [fol. 1551] shields——

Mr. McConnaughey: Do you mean sheet No. 1?

The Witness: Sheet No. 11.

Mr. McConnaughey: You said sheet No. 1?

The Witness: I beg your pardon. It should be sheet No. 11. All of the various items of apparatus in connection with manholes. I have already covered sheet No. 12.

Station apparatus and installation information is taken from our monthly station report, which is in turn summarized from the billing records. This course is pursued, because it is practically impossible to obtain entrance to all subscribers' premises, and because the expense involved in such procedure would not be warranted by the value of the equipment. These billing records which I have referred to as being the source of this information show as of the 1st of each month the actual stations then in service.

Mr. Dotson: What sheet are you working upon now?

The Witness: None. The different kinds and types of stations and the different quantities of material are the results of field inventories. In the inventorying of Central office equipment it has always been the practice to take this equipment in complete detail. A special set of men, experienced in telephone operation and inventory work, are assigned to this class of property.

By complete detail I mean the following: The number of sections and positions of each type and manufacture are listed, the number of subscribers' lines and cords; lines and multiple are counted and listed, and the manufacture of [fol. 1552] each and so forth, the kind type, number code, and so forth of line lamps, auxiliary relays, auxiliary lamps, cords, keys, jacks, plugs, repeating coils, supervisory relays, supervisory lamps, condensers, retardation coils and other kindred items are identified and listed in each circuit. These are listed for the subscribers' line circuits, cord circuits, operators' telephone circuits, traffic circuits, peg count circuits and so forth. The equipment is listed in a similar manner for the service observing desks, chief operators's desks, information desks and other desks.

In the terminal room the amount of iron frames, that is, the capacity, is listed for the main distributing frame and the kind and number of protectors, and kind and number of terminal blocks, kind and amount of jumper wire, the number, kind, size, guage and length of cables from the main distribution frame to the intermediate distributing frame, kind, size and amount of jumper wire on the intermediate distributing frame, the number, size, kind, guage and length of cables from the intermediate distributing frame to the multiple jacks, to the answering jacks and to the line and relay racks is also measured and listed.

The power equipment is listed in detail, indicating the manufacture, kind, size, capacity, horse-power or whatever may be required to properly identify the particular kind of equipment or apparatus in order that it may be properly and correctly priced.

Q. You are now referring, Mr. Williams, to the way in [fol. 1553] which the property is listed in the inventory?

A. Listed; not in the inventory, but listed in the field.

Q. Listed in the field?

A. Yes, sir. I will discuss the way it is listed in the in-

ventory later. Some of these items of power equipment are generators, motors, ringing machines, power switchboards, fuse panels, batteries, power leads, battery leads, rectifiers, gas engines and so forth.

Types of telephone plant and equipment change frequently. Sometimes this change is only slight and the resulting change for any particular item does not amount to a great deal for each item, but when you take into consideration that there are thousands of items of different kinds, the aggregate amount of this change would be considerable. Even if no changes took effect in telephone properties there are many thousands of kinds of items in a telephone property, such as that owned by the Ohio Bell Telephone Company.

The item of coils, to use a general term covering cut-off and supervisory relays, repeating, ringer and induction coils and retardation coils, and a host of others, typify the point I have in mind. There are actually thousands of different kinds of coils in a telephone property such as the Ohio Bell Telephone Company. Now, in order that the men may not be burdened with an attempt to recollect all of the different types and code numbers, so that they can be properly listed and priced, the men are furnished both in the office and in the fields with catalogues indicating the type and code number and the manufacture of all of these different items. Some of these catalogues are prepared by the Ohio Bell [fol. 1554] Telephone Company, and some of them are the manufacturers' catalogues. These catalogues are referred to by the men in the field, the men in the office, and by myself, frequently. In addition, we have in the Columbus office a card catalogue file, indicating not only these various things I have spoken of, that is, the size and the code number, but also giving the specifications and a picture for every part, for instance, of a relay, the kind of metal, the thickness of metal, the kind of screws, length of screws, number of threads per inch, the kind of wire, the gauge of the wire, and insulation of the wire, not only for all of the apparatus and plant and equipment now manufactured by the Western Electric, but all kinds and types that have been manufactured in the past.

Q. You mean manufactured and used in the plant here?

A. Yes, sir. We also have on file in the office and furnish to the field men not only the catalogues of the Western Electric Company, but the catalogues of the independent manu-

facturers, so that they can identify and properly price the various items, not only of Western Electric manufacture, but those of independent company manufacture.

To return for a moment to the central office equipment, machine switching equipment or so called automatic equipment, is, of course, listed similarly to manual equipment for those items which are similar. The automatic features are listed according to the number and kind of switches, such as the master switches, primary line switches, secondary line [fol. 1555] switches, selectors, and these are all counted and listed; also the make-up of each switch is listed so that each line or assembly can be properly identified and priced.

Private branch exchanges are listed, giving the manufacture, type, capacity, number of lines, cords, trunks and so forth, and for the multiple boards they are listed in the same detail as central office telephone equipment already discussed.

I am ready at this point to discuss Exhibit No. 3, the inventory itself.

Mr. Shuler: I would like to ask a few questions first. Exhibit 3 is the inventory that has been filed?

Mr. Burr: Yes. Now, just a moment. I do not want to ask that counsel be limited at all in the cross examination, but in one or two previous cases we have had instances of the witnesses being constantly interrupted and questions interpolated by counsel, by various counsel, such that, as one of the Commissioners remarked in the toll case, I think, the record was resembling or would resemble a crazy quilt, if the same procedure was followed for a very long time. It is the hope of the telephone company that that will not be repeated, and it would be my suggestion that the witness be allowed to finish his testimony in chief, in so far as it is possible before the cross examination takes place.

Mr. Shuler: My questions, if the Commission please, go to the point of allowing this man to testify at all as to the inventory.

[fol. 1556] Commissioner Poor: Your questions are going to be along the lines of his qualification to make the inventory?

Mr. Shuler: Yes, sir.

Commissioner Poor: I think possibly you may go into that.

Cross-examination.

By Mr. Shuler:

Q. Mr. Williams, you say that this inventory was made up from plant records and from the field?

A. No, I say that the plant records were used as the starting point, and they were all corrected, indicating exactly the condition that existed in the field at the time the inventory was taken.

Q. And that field inventory was taken by a large number of persons employed by you?

A. Working under my direction and supervision, yes, sir.

Q. Then you, from that data compiled what you have marked and what will be your Exhibit 3.

A. That was compiled by me and also under my direction and supervision.

Q. It was not all even compiled by you?

A. No, sir, it certainly was not.

Q. Now, take the telephones, that is, now—I have forgotten the technical name of the part—furnished by the A. T. & T. under the four and a half per cent contract?

A. Transmitters, receivers and induction coils.

Q. What was done with them under the inventory?

A. I intended to tell them exactly what was done about them when we come to it, but I will tell you now if you [fol. 1557] care to have it.

Q. No, wait until we get to it. What precautions were made to avoid duplication or overlapping? Withdraw that question for the moment. These men who worked in the field worked in areas, did they not?

A. Yes, sir.

Q. Each one assigend to a particular area?

A. That is right.

Q. What was done towards avoiding duplication or overlapping in that respect?

A. That was avoided in the manner that I have already discussed, by marking each pole, so that any man who came to that pole afterwards knew that that pole had been taken. Also I——

Q. Can you tell me how many areas the state was divided into?

A. I could not, for the reason that each exchange is divided into a considerable number of areas.

Q. This detailed inventory was not made within the last six months or the last year, was it?

A. Not all of it, no, sir.

Q. It was made over a period of four years?

A. Yes, it would be impossible to make an inventory of this size, or practically so——

Q. Well, let us——

Mr. Burr: Let him finish it.

Mr. Shuler: No, he does not need to go on with an explanation.

Commissioner Poor: He has a right to finish.

The Witness: I was going to finish by saying, between [fol. 1558] the dates of the Commission's order, October 15th, 1924, and the last day upon which we had to file this, December 1st.

Q. Some of the data then was as much as four years old that you used to compile this inventory?

A. Yes, sir.

Q. Who determined whether or not the property was used or useful?

A. That was determined by taking into consideration——

Q. No, who determined it? Not how, but who?

A. The field men, under my instructions.

Q. Who determined as to whether it was toll property or local exchange property?

A. The field men under my instructions.

Q. Different men made it in different areas, though, didn't they?

A. Yes, sir, all working under the same instructions.

Q. How was the height of poles measured? By observation of what?

A. Partly. Partly by men who were experienced in that particular line of work and partly by observation and partly—I should say partly by observation and partly by actual measurements.

Q. Does the inventory show anything as to the condition of the various items?

A. You mean the per cent condition or the amount of depreciation existing?

Q. Well, whatever method you used? What was it?

A. I would like to know what you mean by "condition"—if that is what you mean, the amount of depreciation.

Q. I want to know the condition as to good, bad or indif-
[fol. 1559] ferent?

A. I assume you mean depreciation. No, there is nothing in this inventory on that item.

Q. Is there anything in the inventory to show the age of any of the property?

A. No, sir.

Q. Is there anything in the inventory to show what property was owned jointly?

A. Yes, sir.

Q. There is?

A. Yes, sir.

Q. The field men in their respective areas determined that from your records or from an independent investigation?

A. The field men were furnished with that information from the Columbus office based upon our records of the ownership of the property.

Q. You have the worksheets that were used in making up the inventory, have you not?

A. Yes, and at this point I would like——

Q. Well, that answers my question.

A. Then I would like to also say that those work sheets, all of the data and information back of this inventory, are available for the Commission's inspection and check at any time they want it.

Mr. Burr: What is the volume of it?

The Witness: I couldn't tell you hardly. There are thousands, hundreds of thousands of sheets of it.

Q. The men who made the inventory in the field are available, are they not?

A. Some of them. Some of them are not.

Q. A good many of them are available, are they not?

A. Yes, sir.

Q. Where are the others, dead or——

A. I couldn't tell you. I have not followed their history
[fol. 1560] since they left me.

Q. Who determined what land was used, what land was not useful, and what land was held for future use?

A. That was determined, partly by myself and partly by men working under me in the Columbus office, from consultation with and reference to the engineering department, having in view the use at this time and future plans.

Q. You made no part of the field investigation unless it was perhaps spot-checking in some particular instance?

A. That would cover the most of it, yes.

Q. As far as the compilation is concerned, only a part of it is even your compilation?

A. That is true.

Mr. Shuler: I object to the witness testifying as to the inventory.

Commissioner Poor: Do you think, Mr. Shuler, we should require the production of these actual men?

Mr. Shuler: Yes. That is what I contend. Now, I am not certain about it, but I am of the impression that that has been the rule in other Commissions. I am quite certain it was in the New York case.

Commissioner Poor: That they required the presence of the men who actually went out and measured it?

Mr. Shuler: As I recollect it, if the Commission please, they started out just as has been started here. When the question was raised and objection was made, they stopped immediately, and I think they have done nothing on it since, but they are preparing to put it in in that order. That is [fol. 1561] my understanding. Otherwise I do not see how we can get anywhere. If we do not have those field men to cross examine, what is the use of cross examining Mr. Williams.

Commissioner Poor: I do not know that that method has ever been followed in this Commission. I am sure it has never been followed by this Commission since I have been a member of the Commission. The practicability would seem to me to be out of the question of ever terminating the case if we did not. If we have to require the putting on of the witnesses or the furnishing of these men, five to eighty or a hundred men, that were involved in this matter, and then, if, on the other hand, the city or the Commission should determine to make a valuation of their own, to put those men all on, we would have an interminable proceeding.

Commissioner Maullar: Before the determination of the case we will send a man out to the field to work on it, and he comes in here with a check on it, but we would not feel justified in putting on all of his employees, from the fellow who drove the stakes on up.

Mr. Shuler: But the Commission can readily see the posi-

tion we are in. It would be perfectly futile to attempt to cross examine Mr. Williams.

Commissioner Poor: Really, Mr. Shuler, I was just wondering whether you were absolutely sincere in that request that these men be produced.

Mr. Shuler: Yes, I am on that point, if the Commission pleases, because I can see, of course, that I would like to have a representative number of them——

[fol. 1562] Commissioner Maullar: You mean to verify the statements of the instructions given and the part of the work performed by them?

Mr. Shuler: At least, I think we would be entitled to have a representative number, so that we can look into this question of duplication. How did they measure cable? How did they determine the manufacturer? How did they measure poles? How did they show the condition or the depreciation? I believe you say you do not show the depreciation of poles; you do not show the age of anyone of that thing.

The Witness: We have not got to that part of it.

Commissioner Poor: In this inventory the proceedings is on to show what the bare items of property are, irrespective of these other matters.

Mr. Burr: Those will all be shown at a later time.

Commissioner Poor: As I understood it, this was merely a question of the inventory, whether they had the items or the property.

Mr. Shuler: I would like to note an exception anyhow for the purposes of the record.

Commissioner Poor: At the present time Mr. Shuler's objection will be overruled, with the reservation, of course, that if anything turns up in this matter that would require the presence of one or more of these men here and shows a necessity for it, that you may renew your request to have them here, and the Commission will pass upon it at that time.

Mr. Shuler: Just note an exception on behalf of all the cities.

[fol. 1563] Examination by Mr. Burr (continued):

Mr. Burr: With reference to the per cent condition, the Commission and counsel will understand that it is not possible to inventory a condition, and that no attempt has been

made to place a per cent condition on the various classes of property in the inventory. At a later date, when we are concerned with the evaluation of the property inventoried, a per cent condition will be placed upon each class of plant.

Mr. Shuler: Is there any attempt in this inventory to distinguish between property used and useful and property held for future use?

Mr. Burr: That is all covered in that inventory?

The Witness: That is specifically set up in regard to the lands and buildings, Mr. Shuler. I will refer to that directly, as I go through it.

Commissioner Poor: You may proceed.

The Witness: For convenience in binding and in handling I have separated this inventory into two volumes. Volume No. 1, contains 199 pages, and in addition, in the front of it, the indexes for both volumes numbers 1 and 2.

Volume No. 2 contains 160 pages.

Referring to page No. 1 of volume No. 1, the inventory form, sets up first at the head of each page the title "Company wide inventory."

Mr. Burr: Before you proceed, Mr. Williams, both volumes one and two, consisting respectively of 199 and 160 [fol. 1564] pages, and marked "The Ohio Bell Telephone Company," company wide inventory, volume 1, and the Ohio Bell Telephone Company, company wide inventory, volume 2, may be marked for identification as Williams' Exhibit No. 3.

Mr. Dotson: May I suggest that you make that 3-A and 3-B? Then we will be sure.

Mr. Burr: It may be so marked if counsel prefer, volume No. 1 being marked Williams' Exhibit No. 3-A and volume No. 2 being marked Williams' Exhibit 3-B.

And thereupon the volumes above referred to were marked for the purposes of identification respectively Williams' Exhibit No. 3-A and Williams' Exhibit No. 3-B.

Q. These are the same as the two volumes which were filed with the Commission on December 1st, 1924, pursuant to the order of the Commission to that effect?

A. Yes.

Mr. Burr: We offer Williams' Exhibits Numbers 3-A and 3-B in evidence.

Mr. Shuler: We object. I suppose the same ruling and the same exception?

Commissioner Poor: Same ruling. You may save your exception. You gentlemen all understand that it may be understood that exceptions taken by one may inure to the benefit of all.

Mr. Dotson: Yes, it is general, a general exception.

And thereupon the volumes above referred to were of-
[fol. 1565] fered and admitted in evidence on behalf of the Ohio Bell Telephone Company and are herewith submitted, marked respectively Williams' Exhibits Numbers 3-A and 3-B, and made a part hereof.

Q. Now, you may proceed, Mr. Williams.

A. On page No. 1 of Volume No. 1 appears the heading, "Company wide inventory," and below this heading appears the general property division, in the case of page No. 1 land. Next below is set forth in the case just referred to, "1-A, miscellaneous investments, account No. 111. Below these headings, and reading from the left to the right across the page——

Mr. Dotson: Just a moment before you go into that. These account numbers—may I ask, do they correspond with the account numbers authorized by the Interstate Commerce Commission?

The Witness: They are the account numbers authorized and prescribed by the Interstate Commerce Commission for telephone companies and approved by the Public Utilities Commission of Ohio.

Mr. Dotson: These accounts you attempted to make up in accordance with the ruling of the Interstate Commerce Commission as to what constitute or what may be properly included in the account.

The Witness: Yes, that is correct. My understanding is that the order of the Commission provided we set up this inventory in accordance with the uniform system of accounts.

Mr. Dotson: What I mean by my last question is that
[fol. 1566] the Interstate Commerce Commission in setting up this system of accounts, also defined what should be properly included in each account.

The Witness: Yes, and we have followed those definitions to the best of our ability.

(Answer read.)

The Witness: Below these headings, and reading from the left to the right across the page, are shown the designations, items, unit and quantity, indicating respectively the description of the item of property, the unit of measurement and the number of quantities—the number or quantity of the different items.

Q. You are not referring to the first sheet now?

A. I am taking that as an example only—the first sheet.

Mr. Dotson: Your statement is a general description of the entire Exhibit.

The Witness: I am describing the designations now, and I am taking sheet No. 1 as typical or as an example.

Q. Are you referring to Roman numeral No. 1 or Arabic numeral No. 1?

A. Arabic.

Q. Now, proceed please.

A. The unit named is in each case the material item only, such as pole. In addition, it must be considered that along with the pole or other unit goes the quantity of labor necessary to dig the hole, set the pole, tamp in the earth, remove the excess dirt, gain and roof, the freight from the woods where the pole was cut and the hauling of the pole to its present location, must be included, supervision for the labor forces, supply expense, tool expense, and, of course, the [fol. 1567] proper number per pole of the other units of the associated items, such as anchors, anchor guys, line guys, guards, steps, butt treating, brackets, shields, braces and so forth.

Taking up again page No. 1 of the body of the inventory, the uniform system of accounts on page 18, account No. 111 defines miscellaneous investments as follows:

"This account should include investments of a permanent nature in property, (tangible or intangible) other than that held for the operation of the company's plant as a telephone system. It should include such items as investments in lighting, water and power plants, manufacturing plants, lands and buildings and other property not a part of the company's plant for telephone operations or the facilities incident thereto."

The item of miscellaneous investments has been included in this inventory to make the same as complete as possible,

and also because, in analyzing this account, there was found in it as of June 30th, 1924 one parcel of land which was held for telephone purposes, but which had not yet been transferred on the accounting to the 211 or regular land account.

The parcel to which I refer is parcel No. 1, under the listing for the Toledo exchange on page 2 of volume No. 1. This item you will notice is to be used for central office building. You will note that all of the other items are indicated as to be disposed of.

Q. That is all of the other items on pages 1, 2 and 3?
[fol. 1568] A. Yes, and also all of the other items in all of the land and building accounts are so designated, either as to their use or as to be disposed of or as to be used for telephone purposes.

I have spent considerable time in conference with the engineering department and in analyzing the lists of the general Auditor and those of the secretary, in order to determine ownership, locations, dimensions and use. The listing for that account is in alphabetical order and by parcel numbers under each exchange. Each parcel is described as to street number and location, and for each parcel is given the frontage and depth measurements. In the case of irregular shaped parcels, all of the measurements are given.

The next item under this general property division is that of land, account 211, and is to be found on pages 4 to 18 inclusive of volume No. 1. This account covers the parcels of land used and to be used for telephone purposes, although you will note that there are listed four parcels under this account which are disposed of. This is because these parcels have not yet been transferred on the accounting to the miscellaneous investment account. This is just the reverse of the one parcel in the miscellaneous investments account, which is to be used for telephone purposes. The four parcels referred to in the account 211, land, which are disposed of, are parcels two and three at Akron, on page 4 of volume No. 1, parcel 19 at Cleveland, on page 9 of volume 1, and parcel No. 6 at Dayton on page 13 of volume No. 1.

[fol. 1569] Considering both the parcels in the miscellaneous investments account, and the parcels in the No. 211 land account, the Ohio Bell Telephone Company owns 90

parcels of real estate used or to be used in the telephone business as of June 30th, 1924.

The descriptions for the parcels in account 211, land, is similar to that already mentioned for miscellaneous investments, the listing being by exchanges in alphabetical order and by parcel numbers under each exchange; street locations are given, and the various measurements.

On pages 19 to 23, inclusive, of volume No. 1 is listed that part of the main property division of buildings which comes under the head of miscellaneous investments, account No. 111, and which covers the buildings to be disposed of. Here again we have one item, namely, parcel No. 2, at Toledo, on page 23 of volume No. 1, which is to be used for telephone purposes, but which had not, as of June 30th, 1924, been transferred on the accounting records. Buildings are listed by exchanges in alphabetical order and by building numbers at each exchange. They are also identified as to street location and number. Each building is described as to the number of stories, whether with or without basement, whether frame, brick, stone or other construction, whether reinforced concrete or fireproof construction, and the measurements are given for the length, width and height.

At pages 24 and 25 of volume No. 1 are shown photographs of the front and rear views of a typical telephone exchange building.

[fol. 1570] The building shown in these photographs is the Columbus Garfield Exchange, located at 355 Sherman Avenue, in the southern part of the city of Columbus. This building has three stories and basement, brick wall, reinforced concrete construction. It is a fireproof building. It is 31 feet wide by 75 feet long, by 55.3 feet high, with an annex of similar construction 9.5 feet wide by 28.3 long and by 55.3 high.

Q. How does that compare in height with the ordinary building of commercial construction?

A. In height——

Q. Height between floors?

A. Oh yes. Telephone buildings generally, and this building in particular was constructed with greater distances between the floors than the ordinary manufacturing and office type of building, owing to the fact that more head space or head room is required for switchboards and

racks and frames. Also, telephone buildings, generally are constructed so that they will carry heavier floor loads than the ordinary office or manufacturing building, due to the considerable weight of switchboards and racks and frames, even under ordinary conditions, and due to the double or extreme loads that have to be carried in these buildings at time of cut-overs.

Q. State whether you are now referring to buildings of this telephone company?

A. I am.

Mr. Dotson: Mr. Williams, you refer to a manufacturing building as a comparison of character of construction. How are you able to get the comparison? Are you familiar with the construction of manufacturing buildings? [fol. 1571] The Witness: To a certain extent. I get a considerable amount of information in our files and from architectural and engineering periodicals that come to my office relative to construction costs and materials and methods and means of construction for different kinds of buildings. And I know, for instance, that your ordinary office building at least is erected for a floor load of from 75 to 100 pounds per square foot, while telephone buildings are ordinarily constructed to carry from 150 to 175 pounds a square foot.

Mr. Dotson: An office building is not a manufacturing building.

The Witness: No, manufacturing buildings are constructed most often for heavier loads, but comparing them with telephone buildings, it is my opinion the telephone buildings are stronger.

Mr. Dotson: There are various classes of business buildings——

The Witness: That is true. I am speaking of the proposition generally. I also have in mind in connection with construction costs that telephone buildings are built with greater regard to fire protection than ordinary buildings, not only under——

Q. In what respect?

A. In respect to the fact that most of them are built of fireproof, reinforced concrete construction, to take care of fire hazards in connection not only with switchboards and the interruption of service, and also to the large number of operators continually housed in the building.

[fol. 1572] Mr. Dotson: Is that what you require for the floor space or for the walls?

The Witness: For the floor space generally, with a fireproof construction. That is our construction, with brick, concrete and iron work to obviate any danger.

Mr. Dotson: You would not carry your comparison with manufacturing plants beyond what is known as light manufacturing?

The Witness: We go on for a heavier floor as a general proposition and higher ceiling heads than the ordinary factory does, yes, sir.

Q. Proceed.

A. The next general property division is that of central office equipment, divided between account No. 221, central office telephone equipment found on pages 46 to 97 inclusive of volume No. 1; and account No. 222, other equipment in central office, found on pages 98 to 113 inclusive of volume No. 1.

The uniform system of accounts covers as central office telephone equipment the equipment which is used in the operation of the telephone company's plant, as distinguished from account 221, other equipment of central offices, which is more in the nature of office furniture and fixtures.

Page 46 of volume No. 1 is the photograph of an A subscribers' board on the right, and of a B trunk board on the left. The face equipment of a subscribers' board similar to the one shown on page 46 is shown in more detail on page 47 of volume No. 1. At the top of this photograph are shown the large numbers indicating the operators' po- [fol. 1573] sitions. In the center of the board, and appearing as a white square is the list of emergency numbers and so forth.

Below the operators' position numbers is a blank space, which is reserved for future multiple jacks. Extending the full width of the picture and in the upper half appear the multiple jacks, which are shown in the picture as a large number of small closely set holes.

On the right hand side of the picture—four calling cords inserted in the multiple jacks. Down below are the four answering cords connected in the same circles. Below the emergency jacks and between the white strips extending

horizontally appear the outgoing multiple trunks to the toll board and other offices in the exchange area.

Below these outgoing multiple trunks are the answering jacks, and with each of the answering jacks is associated the answering line signal, which appear as small white buttons.

Below these answering jacks are the plugs connected in the calling and answering jacks.

To the left side of the picture are shown two key shelves, opened up. Down below are shown the calling and answering cords and above is shown the wiring on the forms. The operators' answering jacks are indicated right below the key shelves as strips with four or six holes or jacks in them, where the operators plug in their plugs for their head sets.

On page 48 is shown the back of this same instrument. At the top part of the board and running horizontally [fol. 1574] are the subscribers' multiple jacks.

Below the multiple cables you can see the cords and the cord fasteners and the cord hooks.

Below these and appearing as circular metal cylinders are the operators' retardation coils.

Down below these are the cord circuit resistances—no, in between the operators' retardation coils and the resistances are the supervisory relays which appear also as round cylinders pointing out towards the front of the picture.

At the bottom of the picture are shown the answering jack cables. This is a view, a typical view of a No. 1 western electric switchboard.

On page 49 is shown the same terminal room equipment. At the extreme right side of the picture are shown the main distributing frames, and toward anyone looking at the picture there appears the vertical side of these frames with the switchboard protectors.

Next to the left is shown on the vertical side of the intermediate distributing frames.

Between these two frames are the cables running from the intermediate distributing frame to the trunk switchboards and the subscribers' switchboards.

Next to the left is shown the rack containing the line relays and at the other end is shown the racks containing the repeating coils.

Page 50 shows some power equipment used in connection with central office telephone equipment. At the left,

[fol. 1575] the motor generator used for charging the batteries. Next to the right are shown——

Q. What are the batteries used for?

A. For furnishing the current for talking and signalling in the central office equipment. Next to the right are shown the ringing machines. There are two kinds here, one a power driven ringing machine and one a battery driven ringing machine.

Two sources of supply are provided in connection with these machines, so that if one source of supply *sale*, there will still be available another.

Here at this side of the picture are the ammeters and volt meters and below that the rheiostats regulating the charging switches, the charging arresters and circuit breakers, the ringing switches and the ringing motor starting switch. On page 51 is shown a view of a central office battery.

Q. Is that the battery which furnishes the current for talking and ringing?

A. For talking and signalling, yes, sir. At the right are shown the line of batteries, which consist of lead lining in wood tanks and filled with *and* dilute sulphuric acid electrolyte.

And to the left of these batteries are shown the 48 volt battery at the extreme end of the picture, and still further to the left are shown the racks filled with bottles of distilled water for filling the batteries.

On pages 52 to 97 inclusive, of volume No. 1 is listed the detail of the central office telephone equipment owned by the Ohio Bell Telephone Company. This equipment is [fol. 1576] listed by exchanges, and under each exchange is shown the number of sections, and each section is described as to the number of positions, manufacture, code number, type and use for the manual equipment. For the automatic equipment, the number of switches of different kinds are shown.

On page 97 of volume No. 1 it shows the associated items of equipment which must be taken into consideration in pricing out the major items which are listed in detail. Associated items consist of such items as main distributing frames, intermediate distributing frames, coil racks, relay racks, cabling, desks of different kinds, power equipment and kindred items.

Mr. Dotson: What page is that on?

The Witness: That is on page 97 of volume No. 1. On page 98 of volume No. 1 is shown a photographic view of an operators' restroom.

On page 99 is a photograph of a section of an operators' dining room and kitchen.

And on page 100 is shown a photograph of the section of an operators' locker room.

Q. Where are these rooms to be found? In what buildings?

A. In the exchange buildings of the company.

Q. You have spoken from time to time of property listed here as being the property of the Ohio Bell Telephone Company. In order not to be compelled to ask you the question each time, I will ask you whether or not the various items of property listed in your Exhibit No. 3, volumes 1 and 2, are all owned by the Ohio Bell Telephone Company or [fol. 1577] were at the date the inventory was made?

A. Yes, sir.

Mr. Shuler: I object to the question.

Commissioner Poor: Same ruling.

Mr. Shuler: Note an exception.

The Witness: These photographs show some of the equipment that is provided to supply conveniences for the operators and to make the work more attractive. This equipment is part of account No. 222, which is listed on pages 101 to 113 inclusive of the volume No. 1. The items properly classifiable under this account in accordance with the provision of the uniform system of accounting are found in operators' lunch rooms, kitchens, locker rooms, school rooms, and so forth, and they consist of chairs, tables, phonographs, pianos, rugs, dishes, silverware, linen, kitchen equipment, curtains, desks, fans, linoleum and such items.

Mr. McConnaughey: Are these features of all of the exchanges?

The Witness: These are features of some typical items of those kinds of equipment. The equipment is found in various of the exchanges scattered over the State of Ohio.

Q. But they are not all equipped with the same type of restroom and kitchen and dining room, are they.

A. No, they are not. This simply typifies some of the items that are properly classifiable under those accounts.

On pages 112 and 113 of volume No. 1 is shown a list of the associated items which must be taken into consideration in pricing out the larger items. Owing to the fact that the company keeps no running inventory of this class of [fol. 1578] equipment, it was necessary to take a new inventory to comply with the Commission's order, and this inventory was taken as of October 31st, 1924, for this class of equipment, and this inventory so taken is the one included in this Exhibit No. 3.

The next general property division is that of No. 4, the distributing system, and it is found on pages 114 to 119, or all of the balance of volume No. 1.

The first class of plant under this general property division is that of account No. 241, exchange pole lines. This account is included in the inventory at pages 114 to 116, inclusive of volume No. 1.

On page 114 of volume No. 1 is included a photograph of some pole line material, such as three bolt guy clamps, iron pole brackets, cross arms bolts, cross arm braces, strain insulators, strain plates, wood pole steps, iron pole steps, pole hub guard, and other items of a similar nature.

On page 115 is shown a photograph of some typical rural and toll line construction, showing poles, wire, cross-arms, stub poles, strain plates, anchors, guys and so forth.

Q. That is all open wire construction, is it not?

A. Yes, sir. On page 116 of volume No. 1 are listed the exchange poles owned by the Ohio Bell Telephone Company. These poles are shown by height and average class. At the bottom of page 116 of volume No. 1 are shown the associated items that must be taken into account in obtaining the [fol. 1579] proper costs for this class of property, these associated items consisting of such items as anchors, guys, hub guards, pole steps, brackets, painting, setting in pavement, in rock, butt treating, and kindred items.

On pages 117 to 126 of volume No. 1 is shown account No. 242 exchange aerial cable.

On page 117 of volume No. 1 are shown some of the associate items which go to make up the aerial and underground cable plant, such items as connecting blocks, fanning strips, cable clamps, suspension clamps, messenger, solder, protector mountings, terminals, sleeves, cable hangers and items of a similar nature.

On page 118 are shown some splices found in cable construction. These are branch splices and knuckle splices.

On page 119 is shown some aerial cable construction connecting with a riser from the underground cable. In this picture appear alongside of the lower part of the pole the riser pipe from the underground conduit; right above it the riser cable, the splice. Right below the cable balcony are shown potheads, and then the cable balcony, then the No. 17 cable terminal, and extending out from the pole to the next pole some aerial cable suspended from messenger.

On page 120 is shown a view of some cable construction entering a central office through an insulated splice and underground dip. Alongside of the lower part of the pole is shown the riser pipe. At the top of it the pipe cap; then the cable; above that the insulating splice. On up the pole is shown the aerial cable and the suspension strand support- [fol. 1580] ing cable and just out from the cable a short ways an aerial cable splice. On the pole are shown the strain plates going around the pole there, to which are fastened the guys, and the guys themselves. Party way down the guys are shown the three bolt clamps, and in between the sets of three bolt clamps are shown the strain insulators.

On pages 121 to 127 inclusive of volume No. 1 is found the detailed list of the exchange aerial cable, that is, account No. 242. This cable listing shows the size, gauge and length of each kind of cable. The terminals are listed according to protection and use, and the loading coils are listed according to type and number.

On page 126 are listed the associated items which are to be taken into consideration in obtaining the cost of this particular class of property. These items are messenger, splices, potheads, pole seats, balconies, terminal equipment, grounds, bonds and so forth.

Pages 127 to 130 inclusive of volume No. 1 contain account No. 243, exchange aerial wire.

On page 127 is shown the termination of some aerial cable and the beginning of the aerial wire, crossarms, insulators and so forth. On page 128——

Mr. Dotson: You have not called attention to the sign on that pole.

The Witness: That was taken out in East Columbus, close to the Ralston Gun Club.

On page 128 of Volume No. 1 is shown No. 17 twist copper clad drop, showing the wire, tie wires, the clay tube in-
[fol. 1581] sulator and the porcelain insulators by which the wire is fastened to the building.

On page 129 of volume No. 1 is shown the detailed listing of the wire account. The wire is listed by metal, size, length, and whether bare or covered. The drops are listed by number and average kind.

Page 130 of volume No. 1 sets forth the associated items which should be taken into consideration in obtaining the proper costs of this account. They consist of messengers, cable rings, underground drops and so on.

On pages 131 to 156, inclusive, of volume No. 1, is shown the detailed listing of account No. 244, exchange underground conduit.

On page No. 131 are shown the items which go into the underground construction. These items are a manhole cover and frame, some wood duct, creosoted conduit, some multiple tile conduit, some sewer tile, some sacks of cement, gravel and sand; also a concrete mixer and some other tools used in the underground conduit construction.

Mr. Dotson: Where was that picture taken?

The Witness: That picture was taken at the intersection of Alum Creek and Main Street in Bexley, a suburb of Columbus.

Mr. Dotson: I was sure it was not taken in Toledo from that paving.

The Witness: That is due to be paved very soon. On page 132 is shown some underground conduit in process of con-
struction. There is shown here the open trench, the exca-
[fol. 1582] vated earth on the right, and the six duct multiple tile on the left, ready for installation.

Pages 133 to 156, inclusive, of volume No. 1, sets forth the detailed listing of the underground conduit account. This class of plant is listed as to main line or subsidiary, single or multiple, number of ducts, number of manholes, and the kind and amount of paving. On page 156 of volume No. 1 are listed the associated items which must be taken into consideration in arriving at the proper cost for this account, which includes bends, risers and rock digging.

On pages 157 to 177, inclusive, of volume No. 1 is shown account No. 245, exchange underground cable. Page 157 is a photographic view of the inside of a manhole. This view

shows the cable, cable supports, and the splices on the underground cable, and in addition the walls and ducts in the manhole.

Page 148 is a photographic view——.

Mr. Dotson: 581

The Witness: I beg your pardon. Page 158 of volume No. 1 is a photographic view of an underground cable entrance to a central office. On the left and running up the side of the picture is shown a splice from the paper insulated underground cable to the silk and cotton insulated cable, which latter runs up and terminates on the main distributing frame in the central office. The cable racks and hangers supporting the cable and the number tags on the cable are shown. This picture is a good view of a cable vault constructed in offices having underground cable en- [fol. 1583] trances to facilitate the handling and splicing of underground cables.

On page 159 of volume No. 1 is shown some block cable distribution, showing the iron pipe riser from the underground cable, the terminal, and the cable distribution over the building.

Page 160 of volume No. 1 is a photographic view of what is known as a W. L. No. 29 house cable terminal, showing the incoming cables, the fanning strips, the protectors, the cross connecting wire or connecting block, and the house cables going out on each side.

On pages 161 to 176 inclusive of volume No. 1 is listed the detail of this account. This detail covers the main, subsidiary and house cables and the gauge, number of pairs, kind, length of each kind of cable, the loading coils and the terminals.

On page 177 of volume No. 1 are noted the associated items which must be taken into account in ascertaining the proper cost for this class of plant. On page 178 of volume No. 1 is listed account 246, exchange submarine cable, which is set up in the same form as other exchange cable, already discussed.

Page 179 of volume No. 1 is a photograph of some typical toll pole line and toll aerial wire construction, showing the toll poles and crossarms, the toll transposition, brackets, wire, phantom brackets, and so forth.

On page 180 of volume No. 1 are listed the details of account No. 251, toll pole lines and the associated items. The listing is similar to that for exchange pole lines.

[fol. 1584] On page 118 of volume No. 1 is shown a picture of loading for toll aerial cables. You will note that there is a specially constructed platform of iron I-beams between the two poles to support the loading cases. The aerial cable is shown entering the loading cases, where it is run through the loading coil in order to induce inductive reactance into the lines.

On pages 182 to 185 inclusive of volume No. 1 is listed account No. 252, toll aerial cable, which is listed in detail similar to that shown for exchange aerial cable already discussed.

Pages 186 and 187 of volume No. 1 list account No. 253, toll aerial wire, which appears in detail similar to that already described for exchange aerial wire.

Page 188 of volume No. 1 lists the detail for toll underground conduit, account No. 254, which is shown in detail similar to that already described for exchange underground conduit.

On pages 189 to 196 inclusive of volume No. 1 is listed account No. 255, toll underground cable, which is set forth in detail similar to that given to exchange underground cable.

Similarly account No. 256, toll submarine cable, is listed on page 197 of volume No. 1 in the same detail as that given for exchange submarine cable.

Pages 198 and 199 of Volume No. 1 cover account No. 207, right of way. As stated on page 198 of volume No. 1 the uniform system of accounts for telephone companies, as [fol. 1585] prescribed by the Interstate Commerce Commission and approved by the Public Utilities Commission, requires the inclusion of this item in the property accounts of the company. There are two main divisions for right of way costs. First, the payments to different parties, usually land or property owners, for the rights to place poles, anchors, guys, crossarms, wires, terminals, cables and so forth, which may or may not in themselves be considerable; and, second, the cost to secure and make available permits on both public and private right-of-way.

Among the costs to secure and make available these permits may be listed the salaries and expenses of right-of-way agents, similar items of cost for plant, engineering and construction forces not regularly engaged in right-of-way work; also, the preparation of plans in connection with the secur-

ing of right-of-way; also, the first costs of tree trimming on new rights-of-way.

A more detailed list of the items of expenditure in connection with right-of-way is shown on pages 198 and 199 of Volume No. 1.

Attention is particularly called to item L, on page 199, showing the plant items for which rights-of-way would have to be secured in reproducing the property owned by the Ohio Bell Telephone Company. These include 685,620 poles; over 83,000 anchors; more than 174,000 miles of aerial wire; over 16,000,000 feet of aerial cable; more than 7,000,000 feet of underground cable; and various other items as listed on this page.

[fol. 1586] Analysis of exchange and toll inventory records indicate that one out of every nine or ten poles owned by the company is set on private right-of-way. This means that about 70,000 poles are set on private right-of-way in the State of Ohio.

These figures are the results of analyses of field inventories from a few months to a few years old and, owing to the considerable amount of road widening and the consequent movement of pole lines, some of which are moved back on to private right-of-way and also the tendency of new subdivisions in municipalities to be without alleys, means that these figures are probably conservative, if anything.

We also have, of course, a large amount of cable and wire on buildings and some conduit on private right-of-way, requiring expenditures for private right-of-way.

Another phase of right-of-way costs that probably requires special attention is that of tree trimming. As I have already stated, the first tree trimming on a new line is a right-of-way expense or charge. It does not go to the pole line, and it is not charged to expense. It goes to the capital account right-of-way.

Mr. Shuler: How can you find out which was original tree trimming and which was tree trimming later on?

The Witness: It does not make any difference whether the trees were trimmed at the time the pole lines were put in or whether they were trimmed subsequent to that time. The first tree trimming is a right-of-way charge, whether it is done at the time of installation or later. It is the first [fol. 1587] cost of tree trimming, and that is a right-of-way charge, according to the uniform system of accounting.

Mr. Shuler: All subsequent ones are expense?

The Witness: Yes, an expense charge. It is only the first cost.

Mr. Dotson: How do you ascertain it is the first tree trimming? Is that according to a system you have of keeping your work?

The Witness: That can be very easily told from inspection. You have a pole line that goes through a woods in which you feel the trees are 50 to 75 years old. You know if those trees were trimmed that they were trimmed either at the time or subsequent to when the pole line was put there?

Mr. Dotson: How is this cost of trimming made up, at the time it is trimmed or subsequent, when you make an inspection?

The Witness: If you are talking about the costs that got into the book figures, they are made up at the time the trimming is done, that is, they are based on actual costs. If there were no tree trimmings done there would be no expense for that account charged to capital account. But wherever we have to go through woods it is almost unavoidable that we have to do tree trimming.

Mr. Shuler: Is this trimming done by men on the regular payrolls, working at other lines of work as well, and that are paid a per diem or monthly wage? If that is so, how do you arrive at the cost of the tree trimming?

The Witness: We arrive at that cost, Mr. Dotson, just [fol. 1588] exactly the same as we arrive at all of our costs. That is, a record is kept for every use of time worked by every man and what he works on. Now, if he works on new tree trimming on right-of-way, his time is charged up through the payrolls and payroll distribution sheets to account right-of-way. If he works on construction of pole lines, it is so charged. Later in my testimony I am going to take up in connection with property, additions and deductions and discuss our accounting in connection with which we make those charges, and that will probably bring it out more clearly to you than what I have just told you now.

Commissioner Poor: That winds up your preliminary statement on volume No. 1?

The Witness: I was not quite through with right-of-way, but I can stop here just as easily.

Commissioner Poor: How much have you on that?
The Witness: Not a great deal.

And thereupon the further hearing of this matter was adjourned to Tuesday Morning, January 20, 1924, at 10.00 o'clock.

[fol. 1589] Tuesday Morning

January 20th, 1925.

And also GEORGE B. WILLIAMS, resuming the stand for further examination in chief, continued his testimony as follows:

Examined by Mr. Burr:

(Record read.)

Q. Mr. Williams, at the close of your testimony last evening you were in the midst of discussing the item of right-of-way. Will you please proceed?

A. The tree trimming item on right-of-way may be divided into two classes, tree trimming on public right-of-way and tree trimming on private right-of-way.

Examples of tree trimming on public right-of-way are numerous and common. Some trees are trimmed so that all or part of the branches or limbs are cut off along the side of the road next to the pole line. In cases where the crossarms and wires on the pole or line are under the trees along the side of the road, all or part of the limbs over the line are cut off. In other cases where the crossarms and wires on the pole line are over the trees the branches and tops of the trees are cut off flat under the wires. In yet other cases where the line cannot be constructed without too much interference from trees, the trees are purchased outright [fol. 1590] and cut down. There are several kinds of cost involved in the securing and exercising of these tree trimming permits, such as negotiations for the permits, which include salaries and traveling expenses and payments for permits, and last but not least, the cost of labor and the expenses incidental to the actual tree trimming or cutting.

The other class of tree trimming is that on private right-of-way. The most frequent examples of long stretches of this kind of right-of-way and the very considerable tree

trimming costs incident thereto are found in the hill country of eastern Ohio. The lines in eastern Ohio do not generally follow the roads. You will find them going up hill and down hill, through the woods and over farm lands, generally in straight lines. And the reason for this is that, to follow the route of road in this hill country, would necessitate two long lines, that is the roads twist and wind over the hills back and forth. And in addition it would necessitate a very considerable expense in the way of pole bracing or pole guying on the numerous turns that these roads make through the hill country. In eastern Ohio we have many, many miles of private right-of-way. In fact, in some sections the right-of-way is so considerable, the private right-of-way is so considerable that it constitutes 45 per cent of the entire number of poles in that section.

Mr. Kinnison: What do you mean by "Eastern Ohio" Mr. Williams?

The Witness: I mean roughly on a line drawn beginning just east of Cleveland, running down through Akron, east of [fol. 1591] Newark, and Zanesville and down to Chillicothe.

Just one more phase of right-of-way, and I will have finished that volume No. 1 of the inventory. This inventory at some stage of the proceedings will probably be converted into a reproduction cost new appraisal. The company now enjoys private right-of-way in front of residences through shade trees, in lawns, in some cases in flower beds, alongside of garages and buildings, that, if it were possible to reproduce at all, there is no question but that it would be at very high costs.

The next general property division——

Q. Just before you leave right-of-way, Mr. Williams, has the company been put to any expense in order to defend its right-of-way in any instances known to you?

A. Yes, sir, we have in our records, and I have seen them, records of legal proceedings necessary to defend private rights-of-way.

Q. Some of those proceedings are going on all the time, aren't they?

A. Generally so, yes sir. We have them frequently.

The next general property division is that of station equipment and the first class of plant under this subdivision is account No. 231, station apparatus, appearing at pages 1 to 5 inclusive of volume No. 2.

Page No. 1 of volume No. 2 shows the picture of a desk set, Bell box, cord, protector, interior wire, clay tube, porcelain knob and associated equipment.

Page No. 2 is a photograph of different kinds of station apparatus and installation material. It shows wall sets, [fol. 1592] desk sets, protectors, porcelain tubes, porcelain blocks and substation wire.

On pages 3 to 5 inclusive appears the detailed listing for the station apparatus account. This listing shows the quantities for common battery, local battery, automatic sets, and the division in different classes of service, such as business, residence, extension, pay station, private branch exchange, private line, long distance terminal, vacant house, and also the transmitters, receivers and induction coils owned by the Ohio Bell Telephone Company.

Now, I think this will answer Mr. Shuler's question in regard to the transmitters, receivers and induction coils. We have listed only those of foreign type make instrument that actually belong to the Ohio Bell Telephone Company. Those covered by the so-called four and a half per cent or license contract are not included in this inventory at all.

Mr. Shuler: Not for the record, but just for information, what percentage are these of all? What have you got? About 500,000 in the state?

The Witness: Well, there are about between 15 and 20 per cent.

Mr. Shuler: About 15 or 20 per cent?

The Witness: Yes, somewhere in there roughly.

Mr. Shuler: Are they listed separately?

The Witness: They are set up on page No. 5 along towards the bottom of the page, number of transmitters, number of receivers and the number of induction coils.

Mr. Shuler: You have nothing in three, four and five [fol. 1593] with relation to transmitters, induction coils and receivers.

The Witness: Except the ones actually owned by the Ohio Bell Telephone Company. They are listed there towards the bottom of page 5, the ones that are owned. None of the rest are in there.

Also, on page 5 of volume No. 2 are shown the associated items which should be taken into account in arriving at the proper costs of this account. They consist of such things

as transmitter arms, extension brackets, keys, buzzers, switches, battery boxes and so forth.

On page 6 of volume No. 2 is shown account No. 232, station installations, which is listed in much the same detail as that set up for the station apparatus account.

Page 7 of volume 2 is a photograph of some interior block wiring, showing the wire, the knobs and the rings, and the distribution of the wire over the building.

Page No. 8 covers the listing of account No. 232, showing the number of wires and the associated items, such as clamps, straps, messenger and rings.

On page 9 of volume 2 is shown a photographic view of the front of two sections of a Western Electric 80 line No. 550, private branch exchange. It shows the answering jacks, trunk jacks, plugs, cords, keys and other items.

Page 10 of volume No. 2 is a photographic view of the rear of the same board, showing the connecting rack, cable forms, operators' telephone equipment, cords, cord fasteners, the line and cord circuit relays, the supervisory relays, the retardation coils, and the condensers.

[fol. 1594] Pages 11 to 35 of volume No. 2 set forth the details of this account, listing the boards by manufacturer, type, capacity, code number and the multiple boards are listed in the same detail as those for central office telephone equipment, already described.

On page 35 of volume No. 2 are set forth the associated items which should be taken into consideration in arriving at the proper costs for this class of property. They consist of such items as cable frames, racks, terminals, chairs, power equipment and kindred items.

On page 36 appears a photograph of two typical booths.

Pages 36 and 37 cover account No. 235, booths and special fittings.

On page 37 are listed the booths by compartments, and there are also shown the associated items, such as stools, signs, fans, switches and electric light fixtures.

The next general property division is that of account No. 261, office furniture and fixtures, which is included in the inventory at pages 38 to 54 of volume No. 2.

Page 38 is a photograph of a commercial office, showing a considerable amount of office furniture and fixtures.

The detailed listing for this account is set forth on pages 39 to 54 inclusive and sets forth the detail and covers such

items as desks, chairs, rugs, typewriters, files, cabinets, adding and calculating machines, bookcases and so forth. This item is found in the local, district and general offices of the plant, commercial and engineering divisions of the company.

[fol. 1595] On page 54 is shown a listing of the minor items for which some allowance should be made in addition to the major items previously listed.

There should have appeared at the bottom of page 54 in volume No. 2 the notation, "Inventory as of October 31, 1924." Inasmuch as we keep no running inventory or record of the items of office furniture and fixtures, it was necessary to make a new inventory of this account as of October 31, 1924, to comply with the Commission's order. And the listing on pages 39 to 54 inclusive is this inventory.

The next general property division is that of tools, implements and store equipment, the listing for which is found on pages 55 to 131 inclusive of volume No. 2. The first section of this division is that of account No. 263, general store equipment, which is listed on pages 55 to 58 inclusive of volume No. 2. This equipment consists of such items as benches, cabinets, desks, chairs, bins, partitions, racks, trucks and so forth.

On page 58 of volume No. 2 are set forth a number of the minor items which should be taken into consideration in addition to the major items listed in detail for this account.

Pages 59 to 131 inclusive of volume No. 2 lists account No. 265, general tools and implements.

On page 59 of volume No. 2 is a photograph of a few typical tools used in the telephone industry, such as ladders, shovels, cross cut saws, carrying hooks, bush hooks, tamping bars, buckets, testing sets, bits, braces, cable benders, cable saws, hand saws and items of a similar nature. [fol. 1596] These items are listed in almost indefinite detail on pages 60 to 131 inclusive of volume No. 2.

Q. Mr. Williams, I think you have already covered it, but it might be well to ask you again whether the figures under the word "quantity" in every instance in the inventory, means the number of the particular thing inventoried and found as a part of the property of the company?

A. Yes, that is the description of that designation in the form.

Q. What is the meaning of the column headed "unit"?

A. That is the measurement or identification of the particular kind of item.

Q. For example, take page 60, the first item appearing on that page is "adjuster, bank spring," and to the right of it under the column headed "unit," is the word "each"?

A. Yes.

Q. That means that you have inventoried the adjuster bank springs one at a time, doesn't it?

A. We have inventoried so many bank springs adjusters, yes, sir.

Q. I should have said bank spring adjusters?

A. Yes, sir.

Q. Now, in the case of alcohol, which appears a little further down on the page, the word "cans" appears under the word "unit". That means that the alcohol inventoried on that date has been inventoried by the can full?

A. Yes, sir, there are so many cans full of alcohol.

Q. And similarly throughout the inventory?

A. Yes, sir.

[fol. 1597] Q. So that where on page 136, for another example, you show under the word "unit" the abbreviations "tr. ft." that means that the main line conduit single tile shown in the first item has been measured by the trench foot, does it not?

A. Yes, sir, and the number of ducts in each run is indicated over under the items or under the heading of "Item", like 26 or 27 duct or 30 duct, and there are so many trench feet of each of those different kinds or number of ducts in the run.

Q. The total duct feet by that item would then be 26 times 237, would it not?

A. For the first item on page 136 of volume No. 1 that is correct, yes, sir.

Q. You may proceed.

A. Referring again to the item of general tools and implements, found on pages 60 to 131 of volume No. 2, this is another case in which the last inventory which the company had was taken some time ago, and it was necessary to take a new inventory, in order to comply with the order of the Commission. This inventory was taken as of October 31, 1924 and is the inventory that appears in Exhibit No. 3 at pages 60 to 131 inclusive.

The next general property division is that of account No. 264, general stable and garage equipment, which is found on pages 132 to 139 inclusive of volume No. 2.

Pages 132 and 133 are respectively photographs of a line and maintenance truck, which are used in plant construction and maintenance. These two photographs show typical items of motor vehicle equipment which are properly [fol. 1598] classifiable under this account.

Pages 134 to 139 inclusive of volume No. 2 lists in detail the stable and garage equipment. This equipment is briefly the motor vehicles and the tools and the machinery used to keep these motor vehicles in repair.

At the end of this account on page 139 of volume No. 2 there is a list of the minor items, of which some account should be taken in arriving at the proper costs for this class of property. These items designated as minor items are none of them listed in the detailed listing above.

In connection with this account, it was also necessary to take a new inventory as of October 31, 1924 to comply with the Commission's order, and this inventory so taken appears on pages 132 to 139 of Exhibit No. 3, volume No. 2.

Pages 140 to 146 inclusive of volume No. 2 deal with the item of omissions. I have repeatedly testified that from a practical standpoint a perfect inventory is an impossibility. Omissions are of two general classes, those that we do not intend to make, in other words, errors, and those that are made intentionally. Both classes, intentional and unintentional omissions, are allowed to occur because the additional expense involved in securing the exact counts and measurements is not justified by the added value. Another way to state that is to say that it is more economical, when you get to a certain point in the detail in which you are taking your inventory, to make up the balance of additional value by an added percentage, rather than seek further refinement in detail at an expense disproportionate to the [fol. 1599] value added. In other words, the further you chase your missing items, the more your expense will go up in proportion to what your realize.

On pages 140 to 146 inclusive of volume No. 2 is set up some of the typical items of omissions and some specific items of the same nature, the latter found from re-checks and analyses subsequent to the original field inventories. Typical items of omissions, which experience shows us are

liable to occur, are those that are set up on pages 140 and the major portion of page 141.

They are listed under the different classes of property, such, for instance, as under land the cost of title searches and opinions, sewer assessments, purchasing, abstracting or recording fees; under buildings, electric light, wiring and conduit runs, flag staffs, fences, sidewalks, trees, shrubbery and sod.

Under central office equipment is listed a considerable number of items which are omitted in the inventory of a telephone property, and so on down through the different accounts.

At the bottom of page 141 begins the study of specific items developed from checks and analyses of inventories subsequent to the time of taking the field inventory. They are listed under the different accounts and under the different exchanges in which the omissions were found. Probably half or more of the total number of exchanges of the company are shown in this list of specific omissions, setting [fol. 1600] forth the particular items that were omitted in the inventory of the properties in those exchanges.

In connection with this item of omissions, if you will refer to page 48 of volume No. 1, and look again at the view of the rear of the switchboard presented there, you will note that the material parts, thousands of them, are packed in just about as close as they can be put in. Then, if you turn forward to the next page, No. 49, of volume No. 1 which is a view of the terminal room, you will find that there are more thousands of these items put in just about as close as the men could work between them. As against that, our outside plant is scattered over the entire State of Ohio, 35 to 40,000 square miles. In order to get an idea of the quantities of items that it is necessary to measure and count and list, as bearing on the item of omissions, let us consider a few figures.

The company has something in excess of 500,000 stations in the State of Ohio. That means not considering the Bell boxes or the booths or the cords or the small items separately, but taking the assembly as a whole, the company has over 500,000 pieces of station apparatus in the State of Ohio. In connection with each one of those assemblies of station apparatus, there is a station installation. That means over 500,000 of those. In order to connect each one

of those stations with the outside property of the company, it is necessary to have either a drop or a cable connection. That means that there is 500,000 of those. That means of the stations alone we have in excess of 1,500,000 major items.

[fol. 1601] On the poles the company has over 685,000 poles. Over 765,000 crossarms and over 83,000 anchors with the exception of the plant added since the field inventory itself, each one of these poles, crossarms, anchors and so forth were listed and counted. The company also has more than 174,000 miles of aerial wire. Allowing 35 spans to the mile means 6,090,000 spans of aerial wire. With the exception of that part of the aerial wire inventoried since the inventory dates, all of these spans were counted and listed.

The company also has in excess of 16,800,000 feet of aerial cable. With the exception of that part of the cable added since the inventory dates, every foot of this cable was counted. Underground cable, 7,900,000. All of this was counted. Of conduit—3,200,000 feet of conduit, not duct feet but trench feet; this was all counted and measured with that exception. The same is true of block cable, 175,000 feet. House cable to the extent of 375,000 feet. In our general accounts we have counted and listed over 200,000 different items. In our central office equipment we have in the neighborhood of 250,000 items, taking into consideration the terminals, protectors, jumper wires, relays, cords, plugs answering jacks, multiple jacks, lamps, resistances, cables, relays, repeating coils, condensers, keys, power equipment and all of the associated items, I have estimated 50 items per line. That does not mean the screws and nails and all of the small stuff. But taking those items into con-
[fol. 1602] sideration, I have estimated 50 per line that are counted and listed, which is 12,500,000 items of central office equipment, just as reflecting on the number of minor items that are not taken into consideration in this account. It is my estimate we have over a million soldered connections in the main office alone, but counting these, we have that 12,500,000. That makes over 50,000,000 items of telephone plant which, with the exception of the part that was added since the field inventory dates, has been counted and listed, all of it, in accordance with the requirements for inventory purposes.

Mr. Shuler: Are you through with that statement now?

The Witness: That particular item of figures, yes, sir.

Mr. Shuler: I want to move that all of the testimony given by this witness relative to assuming thousands of miles of cables and assuming poles, and that the company has so many of this and so many of that, be stricken out, on the ground that he did not count them and he did not measure them, and, therefore, his testimony is of no value and incompetent as positive evidence that the company has property.

Mr. Burr: Mr. Shuler, would you say that before a man is competent to testify to the ownership of some particular part of the company's property, he must have gone out and seen it himself?

Mr. Shuler: I am not raising that question. I am just raising the other question. I will have to think about that a moment.

Mr. Dotson: One point about it, if I may remark on it, [fol. 1603] is this. This is a conclusion of the witness, arrived at evidently from the tabulation that has been made of these Exhibits. Now, the Exhibits are here to speak for themselves as far as they are prepared, and it is in effect substituting his conclusions for the Exhibits. That is the effect of it.

Commissioner Poor: It is the summarization of it.

Mr. Dotson: It does not matter. If there is a summarization of it, it would evidently appear in the Exhibit.

The Witness: Pardon me. It does not appear.

Mr. Dotson: Then the Exhibit is here complete. At least, that is what is claimed for it, as complete as it can be practically made, and we are to use that Exhibit rather than any summary that he can make of it or anybody else, excepting the summary which your Honors will make of it after his testimony is in. Now, this is explaining purely and simply this Exhibit, for the benefits of all concerned, in order to enlighten us a little bit more, if possible, on what the Exhibit is for and what it means. And it seems to me it is going beyond the latitude and limit of this testimony that he be permitted to make a summarization of it in this fashion. I do not know that it will do any particular harm, but it seems to me it is improper.

Commissioner Poor: You wouldn't think, Mr. Dotson,

that they are just limited to this inventory without any comments or anything of that kind?

Mr. Dotson: The comments he is entitled to make are those he has made under certain proper limitations. But this statement is simply telling in a few words, according [fol.1604] to his own judgment and opinion, what it is all about. Now, that is the thing we complain of.

Commissioner Maullar: Upon what did you base your summarization, data contained in these inventories?

The Witness: Yes, sir.

Mr. McConnaughey: How many items are there in these invoices that you file here?

The Witness: I couldn't tell you altogether. There are a great many ways you might summarize that. I have simply picked out one way to summarize it in order to show some of the reasons for including the item of omissions.

Mr. Shuler: Part of your data here that you used in making your summary.

The Witness: Oh yes, it is in the inventory.

Mr. Shuler: But did not carry that in your mind as you went through the inventory and jot it down on paper and add it up.

Mr. Burr: Suppose he did. This witness, Your Honors has a perfect right to take any part of the inventory which he pleases and which is in evidence and comment on it.

Mr. Shuler: Why?

Mr. Burr: Just a moment. He has a perfect right to comment on any part of this inventory he wants to in connection with his further testimony. I am not talking now about his arguing in favor of this inventory. I am not doing that at all. I am not saying that the witness has a right to argue in favor of the correctness of, we will say, the trench feet the duct feet or anything of that sort. That [fol. 1605] is not what I am saying. He is now discussing a particular item of property which there is in this telephone plant, namely, the item represented by the omissions. Now, in order to show how and why the omissions occur, just what this witness has been doing, he has a right to summarize the items that there are in this plant, in order to point out how easy it is for some of them to be omitted. And that is all that he is doing.

Mr. Kinnison: Opinion testimony?

Mr. Burr: No, he is saying that the item of omissions

is proper, and he is testifying to that as an expert. And experts have testified to that time after time all over the United States,—so far as my reading has gone at least. You will find the item of omissions allowed in every case, allowed by every engineer whose testimony I have ever read or heard. Now, Mr. Williams is testifying to the fact that the item of omissions is a proper one, and he is testifying to that effect as an expert witness. And all th[illegible] he has done by this summary, which seems to have stirred up so much strife and contention here, is to show that by reason of the presence of several million items in one class of the plant inventory, it is easy for some of it to be omitted in a field count made of those items. That is all he has stated. It seems to me that to say that he cannot go back and refer to his inventory or refer to any of the facts stated in the inventory and summarize them briefly in order to illustrate a point which he is making, is going quite beyond the limits of any objection that I have ever heard to testimony of this kind. In fact I have never heard any before today. [fol. 1606] Mr. Kinnison: His premise Your Honor is on an entirely different basis.

Commissioner Poor: If instead of referring back to an item where he obtained a million quantities he was referring back and making his figures on eight pieces of real estate, which have been set out here—that is a matter that has gone in here—or referring to fifteen buildings, which is a small item, he certainly would have a right to do that. The mere fact that it runs up into big quantities should not in itself support an objection to it. He is referring to these items that he has tabulated and saying that they amount to those figures.

Mr. Burr: There is another thing to be taken into consideration, if Your Honor please.

Mr. Dotson: If Your Honors please——

Mr. Burr: I had not quite finished what I had to say, Mr. Dotson, so if you will permit me to finish it before you take the floor again, I will appreciate it.

Mr. Dotson: That is all right.

Mr. Burr: This witness, by reason of the fact that he has been the appraisal engineer of this company for the time that he has, and he states what appraisals he has made, is presumed to know something about the extent of this property. Now, it is his business to know these facts,

separate and apart from knowing them from this inventory. It is his business, a part of his business to know these facts. And it cannot be said here that his knowledge of the plant is limited to the inventory, and that he cannot talk about [fol. 1607] the plant or property simply because it happens to have been inventoried. He has a right to discuss this property from his own knowledge. And if, in stating that he summarizes what is in this inventory, certainly that does not offend any rule of evidence. But apart from that, he has a perfect right to summarize any part of this inventory that he wants to. The inventory is in evidence. What is there that ties his hands and does not permit him to testify to it? I do not understand the objection at all. In fact when Mr. Dotson started his remarks, I could not make up my mind whether he was talking in favor of or against Mr. Shuler's objection, and I am inclined to think that what he said is more relevant to an argument against Mr. Shuler and for it.

The Witness: May I suggest that on page 199 of volume No. 1, you will find part or at least most of the figures I have quoted. They are set out there, the number of poles, anchors, miles of wire, aerial wire, underground cable, submarine cable, underground conduit, block cable, block wire and so forth specifically.

Mr. Dotson: Now, Your Honors, I do not assume any responsibility for any impression that my remarks made upon Mr. Burr's mind. I thought I understood myself and that was the only person besides the Commission that I was caring to convince. This is assuming more serious proportions than I first anticipated, and what little I said is not to continue the contention or argument, but after all, there is a very large germ of importance involved.

It is important whether at this juncture or at any other [fol. 1608] juncture a witness, such as Mr. Williams, shall be given such broad latitude to indulge in comments of his own upon the record evidence. The latitude under the rules of evidence is very much restricted. Witnesses are not the ones to comment. That is a fundamental rule, that witnesses are not to comment. It is the right of the attorneys and the court to comment. The witnesses are here to testify, to lay before us facts and information that come within their province that may be then used in construing and determining the question that is involved. Now, it is

not for Mr. Williams to make comments here that put the clincher upon any of this evidence and that is the effect of this. He refers us now to a certain page in volume 1, in which a certain summary has been made and he has based his statement upon that. Grant that that is true. Yet the record is here to speak for itself, and when the record speaks, no one else needs to speak for it. That is the purpose of the record.

Furthermore, if he is to be given this latitude, then, of course, it may result in shaping the direction in which this case will drift and the course that it will take. Now, it is not to take that course upon the strength of any comment that any witness may make, and we want this record to stand out here in such shape that all we will need to deal with will be the record. We do not — what realm of inquiry this will take, and we should not be loaded down here and confronted with a lot of statements that witnesses may assume to make that will be given the same standing or importance as the record itself.

[fol. 1609] Now, we have this record. We will have it before us to study and determine what further shall be done and how we shall handle the case, and if we are to encumber ourselves with these statements—and we do not know how far they will go—then we are just simply adding to our troubles.

In studying this, making the summarized statement, I cannot conceive how it throws any particular light upon this question of omissions. The question of omissions he plainly said when he started out to discuss it or to make an explanation of it rather—and it seems to me it was very properly stated—that there comes a time in the course of an inventory of this character that the cost of completing all of the various minor details that pertain to it will be excessive, too excessive to justify the further itemizing of what remains. So that they have reached a point where they may substantially make an estimate, and when they have reached that point, then they make an estimate rather than a particularization of what remains.

His explanation to that point is all right. But that can be made without going into all this general summarizing of all of the different properties that he claims the company owns. This is to be assumed, your Honors, that this company, as its property increased,—which is proportionate to

the increase in dollars—increases the force of workmen and the number of people who are to handle the business, so that the business at all times, at every stage of its development, is taken care of by a proper complement of people who are capable of handling.

[fol. 1610] Now, the question of omissions is no greater proportionately, according to the size of the organization, when they have fifty millions of pieces of apparatus than when they had a hundred thousand. It is just as easy for that company, grown to the point it has, to make this inventory, just as easy to make it accurately and completely, as when it had only one hundred thousand different parts—probably easier, because the organization is more efficient, more competent, and its records are more complete, its methods of doing business are more thorough. Hence, we are in position to expect a more complete inventory than at any other time. The company has known all along through the years that such a stage as this we have arrived at will be reached, and now we are confronted with this situation, that we are requested to accept an estimate of a very important proportion of this property. It must be important or it would not be so designated, and would not be presented in the way it is. Now, we want that presented in a way that it should be and not give as an excuse the fact that it owns so much different apparatus that, therefore, it is going to handle this omission proposition this way.

There is another way of explaining it, and we ought to have that other way. That does not explain it, I claim, that because they have fifty million different pieces of apparatus, that that excuses them from itemizing the plants which they failed to itemize.

Commissioner Poor: Isn't that a question of the weight of it rather than the admissibility of it?

[fol. 1611] Mr. Dotson: That is just where we are going to get into trouble, Your Honors. If we give any significance to it, we are bound to accept that as a reason when it is not the reason as I claim.

Mr. McConnaughey: If the Commission please, there is one other reason that occurs to me that might be considered in this connection. That is, the vast number of items which he has indicated, 50 million, compared with the number of items listed. Mr. Williams says he does not know how many items have been listed. I doubt if there has been a million in these inventories just filed. That leaves 49 mil-

lion that are not on the record except in this statement. The inventory is not complete to that extent. Have we a complete inventory before us?

Commissioner Poor: That is just the point we are dealing with at the present time, Mr. McConnaughey, that the inventory is not complete, because necessarily there are omissions there. He is testifying as to an allowance for the omissions that are not in the inventory.

Mr. McConnaughey: Compare what they have shown us with the 50 million items which he says exists; of what value is this inventory?

Commissioner Poor: The Commission feels that the motion should be overruled. Mr. Shuler may note his exception.

Mr. Shuler: Note an exception.

Q. Mr. Williams, I will ask you whether or not there is inventoried in Exhibit No. 3, volumes 1 and 2, property [fol. 1612] as extensive as that covered by your answer?

A. Yes, sir.

Q. Now, proceed with your answer.

A. On pages 147 and 148 of volume No. 2 appears the item of engineering. Engineering is the planning of expenditures so that property will be economically constructed, according to the best standards available, at the time of construction, and so that it will function most economically and efficiently.

On page 148 of volume No. 2 occurs a quotation from the uniform system of accounts, covering the items that shall be included in engineering. To the man who looks or inquires engineering or the lack of engineering is just as evident in a telephone plant as the poles and wire. Under engineering direction certain timber, sizes and heights of poles are specified, according to the load to be carried, the costs, the ultimate plan and so forth. Inspection reveals the fact that the crossarms are of a particular kind and they are spaced on the poles at a given point and in a certain position. Wires are placed and attached to the crossarms uniformly and after a definite plan. Guys and anchors are placed according to specifications. Particular kinds of cable, messenger and hangers are associated together and are placed in accordance with definite plans. The same applies to the selection and association of central office equipment, build-

ings and every other class of plant. The fact that these poles, wires, cable and other plant and equipment items are not selected or replaced in a haphazard manner or at random is evidence of engineering. The statement of the amounts of engineering in an inventory is neither practicable nor possible.

[fol. 1613] On the contrary engineering is usually expressed in appraisals of telephone property in terms of percentage of property costs covered by the engineer. I have defined engineering and called attention to the tangible evidences of its existence in telephone property, and in the inventory reference is made to the requirements of the uniform system of accounts and to the fact that an allowance is made by courts, commissions and independent engineers for the item of omissions. In addition to the above I have first hand knowledge that engineering costs I experienced in telephone property construction *and* would be experienced in the reproduction of this property. This knowledge comes partly from several years intimate and close association with the engineers and the engineering department of this company, and partly from analyses of actual engineering costs, experienced by this and other companies during the past several years, and at the proper point in these proceedings I will introduce testimony as to these costs.

Q. You list on page 147 certain different kinds and classes of engineering work necessary to the construction of a property such as the one under consideration. Does that Exhibit cover all of the different kinds and classes of such engineering?

Mr. Hagelbarger: I object your Honor, because this is something that is intangible, something that cannot be seen. It is something that in the very nature of the thing itself cannot be inventoried, and I think it has no place in this inventory. I do not want to argue it, but I simply object [fol. 1614] to this engineering being put in here as a part of the inventory.

Mr. Burr: If Your Honors please, the first reason why the gentleman who has just spoken is entirely wrong in his position is that the uniform system of accounts for telephone companies, prescribed by the Interstate Commerce Commission and adopted and approved by this Commission, requires that the item of engineering be set up as a part of a given telephone property. That is the first reason why

the item is a proper one here. The second thing is that engineering inheres in a telephone plant, just as much as does such items as hauling and placing of poles, and you cannot build a telephone plant, such as this one, without engineering, any more than you can have poles without the expense of digging the holes for them, paying the freight on the poles, hauling them to the place of their final location. In other words, there is in this telephone property today a certain amount of engineering, and it is there just as much as any one of these other expenses to which I have referred. Now, you cannot inventory property and inventory all of it without including in the inventory the item of engineering.

Commissioner Maullar: Let me ask Mr. Hagelbarger one question. Don't you believe their inventory should set up everything on which they claim a value?

Mr. Hagelbarger: I supposed that the inventory would set up a schedule of property, something that can be seen and felt and handled. While they may be entitled to this in an appraisal, yet I do not see that they have a right to [fol. 1615] set it up here in this way in an inventory. And then his testimony goes far beyond the item of engineering. This speaks for itself. It needs no explanation. He is giving an explanation without any questions being asked of him, and that might well come later on after an appraisal is made of this property.

Commissioner Poor: I think, Mr. Hagelbarger, their inventory, as Mr. Maullar suggests, should set up all items, whether tangible or intangible, on which they expect to have a valuation made. Whether those items as set up and claimed by them will be allowed is a question for future determination. They have a right to set up in there those items on which they claim they have a right to be allowed. Whether they will be allowed or not is a question for future determination.

Mr. Hagelbarger: I simply object to it. If the Commission rules against me, I will note an exception.

Commissioner Poor: Yes, note an exception.

The Witness: On pages 149 and 150 of volume No. 2 appears the item of general expense. This item covers broadly salaries and expenses of the general officers and their office forces for the telephone company, who would have charge of the construction of its property or who

would be required in the reproduction of the property of the Ohio Bell Telephone Company. This item is similar to that of engineering, in that it is neither practicable nor customary to set it down in the inventory in quantities and amounts.

Mr. Hagelbarger: I object. It is an argument. I object [fol. 1616] to this case being argued by the witness. Now, he compares this with engineering. That is a matter for counsel to do. It is not the province of the witness to get up and argue this case at this time.

Commissioner Poor: Being an expert engineer?

Mr. Hagelbarger: No, not even for an expert engineer.

Mr. Burr: He is not arguing the case, Mr. Hagelbarger.

Mr. Hagelbarger: He is arguing the case. The record will show it.

Mr. Burr: He is not arguing the case at all. He is simply saying that this particular class of property to which he is now addressing himself is similar to another class of property which he has described.

Mr. Hagelbarger: That is exactly an argument and nothing else.

Mr. Burr: Why isn't that one way to shorten his testimony by saying that the two are the same in principle or have certain common attributes.

Mr. Hagelbarger: He is making the same argument that you would make if the question were argued on as to the competency of this and the weight to be given to it.

Commissioner Poor: Objection overruled.

Mr. Hagelbarger: Note an exception.

The Witness: Also it is the usual——

Mr. McConnaughey: What do you mean by "customary"?

The Witness: It is not the custom of engineers to include this item in the inventory in quantities or amounts, because [fol. 1617] it is very hard, and in fact as far as I know, impossible to designate a unit of quantity or amount for engineering. It is the usual practice to include this item in the appraisal on the basis of a percentage determined from an analysis of actual costs for this item.

On page No. 149 of Volume No. 2 reference is made to the requirements of the uniform system of accounts, relative to this item, and on page 150 of volume No. 2 are listed the principal items of cost in connection with general ex-

pense. My experience during the past several years has shown the necessity for the inclusion of this item and the costs incident thereto. This information is derived partly from my association with the general officers of the Ohio Bell Telephone Company and other companies and partly from analyses of costs experienced for this item by the Ohio Bell Telephone Company and other companies. At the proper point in this proceeding I will introduce testimony relative to these costs.

On page 151 of volume No. 2 is set up——

Mr. Hagelbarger: I object to that and ask to have it excluded. He says later on he is going to introduce testimony.

The Witness: As to the costs.

Mr. Hagelbarger: Yes, as to the costs, and I ask to have that excluded.

Commissioner Poor: It may be excluded. It may be excluded at this time.

Mr. Kinnison: If the court will refer to the Exhibit at [fol. 1618] the bottom of page 150 it will find this language:

"For the reasons above stated, courts and commissions, including the Public Utilities Commission of Ohio, and valuation engineers and appraisers generally, make allowance for the item of general expense."

That has no place in this Exhibit; it has no place in this testimony. That appears right straight through. The witness is just saying what he has set out in this Exhibit. That is not the subject of expert testimony.

Mr. Burr: Let us not lose sight of the fact that this witness is an expert on this subject.

Mr. Kinnison: He is not a lawyer.

Mr. Burr: If you gentlemen have attended or participated in cases wherein expert witnesses have testified—and I am quite sure that you have—you know perfectly well that many of the answers of expert witnesses, in fact most of their socalled expert answers, are based upon authority, and they state the authority for their answers. Now, if anything is well settled, it is that a medical man, for example, may give an opinion as the matter under consideration, and he may give as the authority for that opinion the works of well known medical offers. He may give the results of experiments. And one of the chief

sources of his what might be called supporting testimony is the experience of others in the same line, of which he has knowledge and as to which he testifies. Now, I maintain that that portion of Mr. Williams' testimony is entirely competent in view of his status as an expert witness. You may say, if you please, that it is argument, but you [fol. 1619] gentlemen know perfectly well that the expert witness is permitted to verify or back up, if you please, his answers by the citation of authority to the same or similar effect.

Mr. Kinnison: Not authority of law.

Mr. Burr: You may call it expert testimony of others, if you please, you may call it argument, if you please; but the fact remains that the rule of evidence is so relaxed in the case of the expert witness that he may, in fact he is expected to and usually required to substantiate his expert opinion by a certain amount of authority which he quotes and cites.

Commissioner Poor: The Commission feels that the objection to that last paragraph is well taken and it may be excluded.

Mr. Burr: Is it excluded beyond the reference to decisions? May the witness not state that an allowance is made for the item by other engineers?

Mr. Hagelbarger: He is not being cross-examined. He is not driven now to support his evidence.

Commissioner Poor: The Commission has ruled that the objection to that paragraph is sustained.

Mr. Kinnison: The same objection is raised to the last paragraph on page 148 and wherever it appears in the record.

Commissioner Poor: Yes, that holds good to any place where that paragraph is used.

Mr. Burr: Note an exception on behalf of the company.

[fol. 1620] Mr. McConnaughey: Page 146, with reference to omissions.

The Witness: On page 151 of volume No. 2 is set up the item of taxes during construction. This item covers exactly what its name states, that is, taxes during the construction period. Like engineering, it is not inventoried in quantities and amounts, but is usually determined by a consideration of the construction costs, construction periods and the rate or rates of taxation.

On page 151 of Volume No. 2 is quoted the requirements of the uniform system of accounts for the inclusion of this item in the property accounts.

The Ohio Bell Telephone Company is assessed upon its property during the construction period. This statement is based upon my personal study of our books and reports to the Tax Commission of Ohio. In these reports we are required to report our property and construction for taxation as well as the completed property.

For these reasons no inventory or appraisal of the Ohio Bell Telephone Company property would be complete without the inclusion of an item for taxes during construction.

On pages 152 and 153 of volume No. 2 is included the property item of interest during construction. Like engineering, general expense, and taxes during construction, it is not possible to itemize this class of property in numbers or quantity. It is best dealt with by a consideration of property costs, interest rates and the construction period. Up to the time the plant is placed in service or [fol. 1621] revenue accrues, all charges are construction charges, that is, the costs of the physical property go into construction. Likewise all interest on money devoted to construction up to the time of operation is charged against or goes into the construction accounts, along with the money itself that is devoted to construction.

On page 152 of volume No. 2 is a reference to the requirement of the uniform system of accounts relative to the inclusion of this item in the property accounts.

My study of the actual costs of interest on monies devoted to construction as indicated by the records of the Ohio Bell Telephone Company and other companies during the past several years is the basis for my judgment that no inventory or appraisal of the property of the Ohio Bell Telephone Company would be complete without the inclusion of the allowance for the item of interest during construction.

On pages 154 to——

Mr. Kinnison: Referring to the Exhibit on page 153 it is stated that "The rate of interest chargeable during that period should be computed on an annual rate ranging from six to eight per cent." I move that it be stricken out. It is purely opinion testimony. It has no part in this Exhibit.

Commissioner Poor: At the present time that may be excluded.

Mr. Burr: Note an exception.

The Witness: On pages 154 to 157 inclusive of volume No. 2 appears the item of working capital and supplies. [fol. 1622] On page 154 of volume No. 2 is a photograph of the corner of one of our storerooms, showing wire, cords, clamps, clay tubes, solder, brackets and other supplies.

On page 155 of volume No. 2 is a photograph of a pole and cable yard, showing supplies in the shape of poles, crossarms and cable.

Pages 156 and 157 define the item of working capital and state the principal requirements for this item.

Material and supplies consist of many thousands of items and are located at 200 or more different points in Ohio. The inventorying of so many different items would require a great deal of time and expense, out of proportion to the value of the items themselves. Our salary advances are among hundreds of employees. Cash is located in probably 150 or more offices. Much of it is in transit, much of it is in banks. Also a detailed study of working capital would require an analysis of hundreds of debit and credit items in our accounts. All of this would require a material expenditure of time and money.

It has been the custom of this Commission to compute the item of working capital on a certain percentage of the property value. This is in my judgment the proper procedure.

On page 158 of volume No. 2, under the item of miscellaneous construction expenditures is included the loud speaker equipment owned by the company. This item is included in order to show all of the property owned by the company and because this equipment also produces revenue in itself.

On page 159 of volume No. 2, I have noticed the expense [fol. 1623] of construction work in progress as a property item, and stated that the amount of this item will be available at any time the Commission may desire.

A property such as that of the Ohio Bell Telephone Company may to my mind be properly divided into two general classes; the physical property, which includes all of those costs which have been discussed up to this point; and that part of the property represented by the business of the

company. Neither an inventory or appraisal of this property would be complete with- the inclusion of this second item of property. Various terms have been applied to designate this latter class of property. It has been called going value, going concern value, cost of attaching the business, cost of establishing the business, and others, depending upon what particular factors there is an intention to cover.

It is not necessary to define all of these items at this time. The last designation to my mind most accurately identifies the class of property included in this inventory. The cost of establishing the business covers the establishment and acquisition of the business separate and apart from the construction of the physical property. Preparation must be made during the construction period to establish and acquire this business. To this end an organization must be set up and certain costs experienced before the property can be considered as a going concern, conducting business and earning money.

The principal items for which these expenditures will have to be made are as follows:

[fol. 1624] The securing and training of operators and other employees of the organization;

Soliciting and advertising for subscribers;

Maintenance and depreciation costs during the construction period;

The establishment of routines, records and instructions by and under which the property is to be operated; the procuring of contracts with connecting companies; and;

The excess of operating costs and a fair return on the property value over the revenue during the development period immediately succeeding the construction period. This item will be more specifically referred to by a succeeding witness.

This finishes the discussion of the different property items as taken in the field inventories, which are listed in this inventory, and I would like to take up and discusse next the manner in which the field inventories were brought together and brought forward to June 30th, 1924.

Mr. Kinnison: May I interrupt you? According to the Exhibit, Volume 2, page 158, in your miscellaneous construction features, loud speaker and broadcasting equipment, account 274-03—I move that it be stricken from the record, for the reason that it does not constitute a legiti-

mate item for the basis of a rate, being the radio broadcasting equipment of the Ohio Bell Telephone Company, a small item now, but perhaps later a large item.

Commissioner Poor: It is an item they have listed here. Whether they are entitled to have that included, I do not [fol. 1625] think we can at this time decide.

Mr. Kinnison: We make the point now that it is not part of the business of the Ohio Bell Telephone Company on the basis of which a rate charge could be made.

The Witness: May I explain to the Commission that I stated in connection with that item that the reason for including it in this inventory was to make a complete inventory for this property, having in mind that the proper consideration would be given in our appraisal and by the Commission at a later time.

Mr. Kinnison: We elect to raise it now. It is not a proper item of inventory for the purpose of serving the telephone subscribers of the state.

Q. Also I think you stated you included it in your inventory because it was a source of some revenue to the company?

A. Yes, sir.

Mr. Kinnison: Irrespective of revenue; we are not interested in that.

Commissioner Poor: The question of whether it will be allowed in the final analysis as an item of value is a question as to whether it is used and useful or not. It will have to be proved that it is.

Mr. Kinnison: I think that question is being tested in the courts, as to the legitimacy of the charge of radio expenses to be assessed actually in the matter of rates against telephone users.

Commissioner Poor: It would be like any other item that is in there, Mr. Kinnison.

[fol. 1626] Mr. Kinnison: If it came in as a legitimate field of operation of a telephone company, it would be all right. But we raise our objection to this point. I understand that this Exhibit is in evidence, and we move that that portion of it be stricken out.

Commissioner Poor: The motion will be overruled at this time.

Mr. Kinnison: Note an exception.

Commissioner Poor: Of course, if the company does not show that it is used and useful later, we will not take that matter into consideration. If you are going to start in on a new subject, I think we will recess at this time. Before we recess, however, I would like to ask you as to whether you wish to continue with this hearing tomorrow, as we will be able to devote at least a part of the day to this matter if you desire. Do you wish to make any cross examination of these witnesses at this session?

Mr. McConnaughey: There is some cross examination that we could go forward with, but we would just as leave that it go over until later.

Mr. Shuler: Supposing we had an hour this afternoon? We might as well use that, might we not?

Commissioner Poor: But the chances are you won't get through.

Mr. Shuler: I thought your question was addressed to the proposition, do we want to go on tomorrow; is that it?

Commissioner Poor: Yes.

Mr. Shuler: Personally, I could not, because I have got [fol. 1627] to be in court in Cleveland tomorrow. But that does not preclude the rest of them.

Mr. McConnaughey: The same way with me.

Mr. Shuler: Even if we did go on tomorrow someone else could do it.

Commissioner Poor: Hadn't we better conclude the company's presentation of the inventory?

Mr. Shuler: Yes, I think so. I think if we had that evidence before us to read it over, we could get our cross examination in a shape that we could do it in one tenth of the time that we would if we just pot shot.

Commissioner Poor: We will go ahead as fast as we can this afternoon. If we cannot conclude with the company's case this afternoon, we will run on tomorrow morning.

And thereupon a recess was had until 1:30 o'clock P. M. of same day. (Tuesday, January 20, 1924.)

[fol. 1628] Afternoon Session Tuesday, January 20th, 1925.

And also GEORGE B. WILLIAMS, resuming the stand for further examination in chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Mr. Dotson: I understand there is no exhibit before the witness; he is to be given free hand here to tell us what he does not know.

By Mr. Burr:

Q. All right; they say you can go as far as you like, Mr. Williams.

Commissioner Poor: You may resume, Gentlemen.

The Witness: In connection with the manner in which this Exhibit No. 3 was compiled, I would like to discuss the manner in which the field inventories were brought together and were brought up from the field inventory dates to June 30th, 1924, the date of Exhibit No. 3.

First, it was manifestly impossible to make a new field inventory of the entire property of the Company between October 14th, 1924, the date of the Commission's order, and December 1st, 1924, the latest date upon which the inventory was to be filed. And it so happens that it was not necessary to make a complete new field inventory for this purpose. [fol. 1629] This was because during the four or five years prior to June 30th, 1924, we had inventoried all of the property owned by The Ohio Bell Telephone Company except two exchanges and except the accounts to whoch specific attention has been called in the inventory as being as of October 31st, 1924, and except the property added since the field inventory dates. To be able to use these inventories meant a large saving to the Company and to the subscribers.

The two exchanges not inventoried within that period are Cleveland and Columbus. The Cleveland property had been previously inventoried by both the Commission and the Company; and these two inventories were in agreement with each other. Of this agreement I have firsthand knowledge because I participated in this inventory while in the employ of the Commission and personally checked the two inventories.

I might also say in this connection that during the inventorying of the Cleveland property the plan was to have one man from the Commission and one man from the Company check and inventory the property jointly, so that there was an agreement in the field, and in case of an agreement not being reached on some particular item one man each from

the Company and the Commission were sent out to personally recheck and agree upon that particular item. In addition, as I said, I have also personally checked these two inventories and know that they do agree.

Also the Columbus property had been previously inventoried by both the Commission and the Company, and I [fol. 1630] know from personal check that the Commission and Company inventories were in agreement with each other. Both of these inventories, with allowances for subsequent property changes, are incorporated in this Exhibit No. 3. Incidentally this means that I have had charge of or participated in the inventorying of all the toll property of the Company and all of its Exchange property located in each of its exchange areas in the State of Ohio.

All of the field inventories so made have been combined and to them have been applied the additions and deductions from the field inventory dates to June 30th, 1924, making a complete inventory of the Company's property as of that date.

The Company has in effect a very complete and definite plan for the reporting and recording of property changes since the field inventory dates. First, estimates must be prepared showing what property changes are contemplated, the location by maps and written description, the amount of money involved and the reasons for the changes; and also authorization must be obtained from the proper officials before the work is started. When the expenditures of money begin for labor and material, certain reports are forwarded covering all such expenditures in detail.

Inasmuch as the reporting of expenditures for labor, material, sundry disbursements, stable and garage expense, etc., are all closely associated, and as I will refer later in these hearings to this accounting, I will at this time touch on some phases of it, taking up first expenditures and reports [fol. 1631] for

Labor: Daily and weekly time reports record every hour of time worked by each man, what kind of work he does; that is, the code and account number covering the kind of work; the area in which the work was done and the estimate number covering the job. These time reports are transferred to the payrolls and to the hours worked are applied the wage rates for each man giving the payroll disbursements per man.

From the payrolls are summarized the payments by labor groups; that is, the expenditure for all labor doing the same kind of work. Into these total expenditures are divided the corresponding total hours worked by each different labor group giving the average hourly rates. The development of these average hourly rates saves a large amount of accounting time and expense over handling the payments by individual men in setting up the classifications to areas, codes, estimates, etc.

These average hourly rates are applied to the hours worked for each area, code, estimate, etc., and the totals for each of these classifications is transcribed to the area summary.

From the area summaries these expenditures are transferred to the Estimate Ledger Sheets which show the expenditures and quantities of material for each code and account and for each estimate.

Material is issued from the storeroom on disbursement tickets and on the copy of this ticket forwarded to the Plant Accountant is shown the area, code number, esti- [fol. 1632] mate, etc., the same as it is shown on the time reports for the labor.

The Plant Accountant summarizes these material disbursement tickets and at the end of each month applies the proper price for each item.

From these summaries the values of the materials are listed by code, area, estimate, etc., to the area summaries before referred to, along with the labor charges.

Sundry Disbursements are *are* miscellaneous expenses for meals, lodging, traveling expense, light, gas, power and kindred items. They are covered by bills and vouchers and when paid are summarized on a Sundry Disbursements Summary by the Plant Accountant. From this summary they are posted monthly to the area summary, before referred to, along with the labor and material. From the area summaries this item also goes to the Estimate Ledger Sheets.

Stable and Garage Expense is reported also for each hour of use of each motor vehicle on the regular time reports for men, giving the area, code number, estimate, etc., on which the machine was used. These hours are summarized monthly and to them are applied the proper hourly rates. The amounts so obtained are then transferred to the area summaries, along with the labor, material and

sundry disbursements, already discussed, and along with these items are later transferred to the Estimate Ledger Sheets.

These are not all the items nor nearly all the forms included in this routine, but this is probably sufficient to give some idea of the manner in which the work is handled. [fol. 1633] In the end these Estimate Ledger Sheets show the total costs and quantities of property added and deducted for each code and each account and each estimate and form the bases for the additions and deductions to our field inventories, and in addition supply a large amount of information for the determination of our unit costs.

This, then, constitutes the manner in which the property additions and deductions are reported and recorded——

Q. You are now referring to the property additions and deductions which go to make up a part of the inventory?

A. Right. And it is from these reports that the field inventories were brought up to June 30th, 1924.

For several reasons it is necessary for me to have a considerable knowledge of this reporting and recording and the accuracy with which the same is carried out.

In connection with inventories and appraisals prepared for rate cases it is usually necessary to bring these inventories and appraisals up to later dates, during the proceedings, by the application of the additions and deductions to the field inventories, and these additions and deductions are analyzed to satisfy ourselves that the figures are correct and that there is no duplication between these additions and deductions and that which was contained in the original field inventories before they are used.

Also, at the end of each year it is my duty to prepare the retirement unit costs for each class of property for the next year. This job involves the review and analysis of the property additions and deductions by money amounts and [fol. 1634] by quantities for the past year.

Again, in the preparation of our unit costs we analyze the reports of additions and deductions for a given period both in money and in plant quantities.

By reason of these various activities it is necessary for me to have a knowledge of this accounting routine and procedure and to keep in close touch with the recording of property additions by which our inventories are brought up to later dates.

Another point which should be mentioned in connection with these inventories is the fact that our records correspond with these inventories; in other words, what the Commission has in Exhibit No. 3, Volumes Nos. 1 and 2, with the exception of the exclusion of the construction work in progress, is a digest or compilation of the Company's records checked by the men in the field and maintained in accordance with our accounting system, which conforms to the provisions of The Uniform System of Accounts. That is to say, exactly the same inventories as are used in our rate cases constitute our plant records.

This means that the factor of accuracy enters into these inventory figures not only from the standpoint of their presentation in rate cases, not only because they are subject to check by Commission and City engineers, but also because they constitute our own records. I am able to state that they do constitute our own records because I personally furnish them to the Plant Accountant for that purpose, and because later in connection with rate case pro-
[fol. 1635] cedure and the preparation of Retirement Unit Costs I check the inclusion of these figures——

Q. Is that what you have done in this case?

A. Yes, sir; and the additions to bring them up to later dates.

With the one exception, that I have eliminated from the quantities and amounts, the construction work in progress, these inventory figures are exactly the same as our property record.

The separate inventories that are incorporated in this June 30th, 1924, inventory have been checked by the Commission engineers at Cleveland, Columbus, Zanesville, Toledo, and part at least at Akron and Youngstown, and have been checked at Springfield, Xenia, Sandusky, Washington Court House, Lancaster, Coshocton, Painesville, Willoughby and many small exchanges.

City representatives have checked these inventories either in part or in whole at Findlay, Massillon, Dayton and Canton. In other words, more than fifty per cent of this inventory has been checked by Commission and City representatives in connection with previous rate cases.

Q. You say more than 50 per cent of this inventory; by that you mean more than 50 per cent of the property which is shown in this inventory?

A. That is right. I mean by that, the property contained in the field inventories which have been consolidated to make this Exhibit No. 3.

The portion of the property in these exchanges not so checked, or what has been added since the Commission and [fol. 1636] City checks, has been so kept on the Company's records as to be readily identified by any one making an examination for that purpose, and these records are open to the Commission, along with any others, at any time, for inspection and check.

Q. Mr. Williams, you have testified as to the manner in which the property of the Company has been measured, counted and recorded by your men in the field and tabulated in the office, and checked and rechecked and finally inventoried in Exhibit No. 3, Volumes 1*m* and 2, all under your direction and with your participation——

Mr. Dotson: Now is that all the question?

Mr. Burr: No.

Q. (Continuing:) Will you tell the Commission whether or not your Exhibit No. 3, Volumes 1 and 2, correctly shows, to the best of your knowledge and belief, the results of that work?

Mr. Dotson: We object to that. That on the face of it is objectionable. Of course we expect him to say the fact, but that is not what a witness has a right to say.

Mr. Kinnison: He is put on the stand to tell the truth.

Mr. Dotson: He is expected to state what comes within his knowledge and state that in the way of his testimony, not an opinion. This is purely an opinion, and, as Mr. McConnaughey states, it is a leading question.

Commissioner Poor: There are some features of the question that are objectionable.

[fol. 1637] Mr. Burr: The interrogatory part of the question is this:

By Mr. Burr:

Q. Tell the Commission whether or not your Exhibit No. 3 correctly shows to the best of your knowledge and belief the result of that work, and whether, taking into consideration the net additions made since the dates of the field in-

ventories, your Exhibit No. 3 correctly shows the property owned by The Ohio Bell Telephone Company as of June 30th, 1924.

Mr. Burr: In other words, what I am trying to do by this question is to do away with the necessity of taking up with this witness, page by page, the different items there shown and asking him whether or not that property there listed is owned by The Ohio Bell Telephone Company. If you want it that way, we will start in at page one and proceed to ask him.

Mr. Dotson: The whole record this far has been based on that very theory, that very idea, that it is the property of The Ohio Bell Telephone Company. Now that is in the question, whether it is the property of The Ohio Bell Telephone Company.

Mr. Burr: Certainly it is, and it is whether the inventory correctly shows——

Mr. Dotson: Yes, that is it; "correctly shows".

Mr. Burr: Correctly shows the property of the Company owned as of June 30th, 1924; that is the purpose of the question.

Mr. Dotson: He is asking him an opinion, a conclusion, [fol. 1638] that he bases on his own work. That is the thing we are trying to get at, is, from the inventory, from his explanation of it, whether it is the property and whether it is all the property, or how nearly all it is. But for him to just come in and say that in his opinion it is all, does not furnish us with anything.

Mr. Burr: It certainly does, because it goes to the very question of how thoroughly the inventory was made.

Mr. Dotson: No. The test of thoroughness is, as stated, what they did.

Mr. Burr: Very well.

By Mr. Burr:

Q. Mr. Williams, calling your attention to Williams Exhibit No. 3, will you please state to the Commission what land is owned or was owned by The Ohio Bell Telephone Company as of June 30th, 1924?

Mr. Kinnison: Are you going through it item by item, Mr. Burr?

Mr. Burr: Yes, sir, I am going through it page by page, through the entire two volumes.

Mr. Kinnison: Oh, there is no need of that; there is no need to be farci-al.

Commissioner Poor: I don't think it is necessary to do that.

Mr. Kinnison: The exhibit speaks for itself. He is asking this witness to answer the question which the Commission itself will have to answer for itself. He can tell how he compiled this exhibit. The truth or eventual value of it is a thing which only the Commission can pass upon. What [fol. 1639] the witness says about it is immaterial. He can tell how he compiled it but it is for the Commission to say whether it can reasonably believe whether it is true.

Commissioner Poor: I think he can go further than that. The witness is an engineer and he says the inventory has been compiled under his direction and supervision. He can testify as to whether in his opinion as an engineer this represents the property of The Ohio Bell Telephone Company.

Mr. Kinnison: His opinion is not that of an engineer but that of an expert who is usurping the function of the Commission. The natural effect of the answer would be that.

Chairman Marshall: His opinion as an appraiser—he has a right to express an opinion on that. Whether the opinion will be accepted by the Commission or not is a different proposition.

Mr. Kinnison: The objection is based on the ground that the question is not the sort of a question which will bring an answer which is susceptible of an expert opinion. It is not that class of testimony. It is a fact or it is not a fact.

Mr. Burr: How can you show ownership in any Company of a certain property without the testimony of some one to the effect that the Company does own the property?

Mr. Kinnison: You cannot.

Mr. Burr: This witness knows the property of this Company and I am asking him now to state the land that this Company owns.

[fol. 1640] Mr. Kinnison: I am not objecting to that question.

Mr. Burr: I did not think you would, Mr. Kinnison.

Mr. Dotson. It seems to me we are just treading out the already threshed-out part of this case. The witness has taken this exhibit and gone through it already by various

subdivisions. He first started in with the first subdivision of No. 1.

Mr. Burr: He has in no case stated that The Ohio Bell Telephone Company owns this property.

Mr. Dotson: And he stated that this No. 1 consists of the land belonging to the Company, and gives the location. He says as shown by exchanges as it appears in the exhibit. How much more definite can it be stated than that? I cannot conceive. The record shows it now and I cannot see the purpose of this question when he has that very fact in here. He has practically stated that the purpose of the question is, and that has been met by his testimony-in-chief already. And it does call for an opinion when he is testifying with reference to a fact, and he has testified as to the fact in the regular way when he started in to testify yesterday morning.

Commissioner Poor: I think this witness in his qualifications and in several instances gave what the nature of his duties have been with the Company since he has been in the employ of the Company, and that it puts him in a position where he can testify to that. Of course it may be a disput- [fol. 1641] able fact, and you will have an opportunity to dispute any of those facts.

Mr. Kinnison: Let him answer the original question and give us our exception.

Mr. Shuler: That is the quickest way.

Mr. Kinnison: Go back to the original question and give us our exception.

By Mr. Burr:

Q. Mr. Williams, will you state the various parcels of land owned by The Ohio Bell Telephone Company as of June 30th, 1924?

Mr. Dotson: That is not the question we referred to now.

Mr. Kinnison: We had in mind the original question of whether in his opinion this reported all of the property. That is the one we objected to.

By Mr. Burr:

Q. You have testified, Mr. Williams, as to the manner in which the property of The Ohio Bell Telephone Company has been measured and counted and recorded and tabulated in this inventory?

A. Yes.

Q. How, for example, the plates were originally given to the men in the field, those plates being compiled from the Company's records, and how the men in the field checked the information contained on those plates, and how the information from the men in the field was subsequently checked and rechecked; how it was finally inventoried in Volumes 1 and 2 comprising your Exhibit No. 3. Now I will ask you to tell the Commission whether or not your Exhibit No. 3 correctly shows, to the best of your knowledge and [fol. 1642] belief, the result of that work, and whether, taking into consideration the net additions made since the date of the field inventories, as you have testified, your Exhibit No. 3 correctly shows the property owned by The Ohio Bell Telephone Company as of June 30th, 1924?

Mr. Kinnison: Give us an objection and exception generally.

Commissioner Poor: The objection will be overruled.

Mr. Kinnison: Note an exception.

The Witness: That is true.

Q. State whether or not the kinds, quantities and amounts of property and the statements with respect thereto shown in Exhibit No. 3 for the different classes of plant there inventoried are correctly stated to the best of your knowledge and belief?

Mr. Kinnison: We object.

Commissioner Poor: Objection overruled.

Mr. Kinnison: Note an exception.

The Witness: They are.

Mr. Burr: I now want to state for the benefit of the record that the purpose of that question has been in order to obviate the necessity of going through Volumes 1 and 2 of Exhibit No. 3 and asking the witness seriatim as to the ownership by the Company of the items there shown.

Mr. Kinnison: Our exceptions are addressed generally as to the competency of the question and the answer.

[fol. 1643] The Witness: I would like to say one thing in conclusion, and that is that if the Company were to sell or to bond its property as of June 30th, 1924, that this inventory represents exactly the property that would be sold or bonded because it represents our only record of property items.

Mr. Kinnison: I move that that answer be stricken out as a voluntary statement. It has no place here.

Mr. Shuler: He cannot speak for the Company. The Board of Directors are the ones that would talk on that.

Mr. Dotson: With the bankers.

Commissioner Poor: That may go out. It is rather a gratuity in there. That may go out.

Mr. Burr: If there is no cross-examination at this time, Mr. Schneider may take the stand.

Mr. McConnaughey: Let the record show that the cross-examination is reserved.

Commissioner Poor: The record may show that counsel will be granted further opportunity to cross-examine this witness.

Mr. Burr: There is one further question that I would like to ask Mr. Williams at this time.

By Mr. Burr:

Q. At Page 129 of Volume 1 of Williams Exhibit No. 3, the fifth figure under the column headed "Quantity" is 46,630,646. I will ask you whether or not the comma after the zero in the figure should be a comma or whether it should be a period?

A. It should be a period, the proper figure being 46,630.646.

[fol. 1644] And also WALTER G. SCHNEIDER, called on behalf of The Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You may state your name?

A. Walter G. Schneider.

Q. What is your occupation, Mr. Schneider?

Chairman Marshall: You were sworn yesterday, were you, Mr. Schneider?

The Witness: Yes, sir.

Q. What is your occupation?

A. Valuation engineer of The Ohio Bell Telephone Company.

Q. How long have you occupied that position?

A. Since the present Ohio Bell Telephone Company has been in existence.

Q. That is since September, 1921, is it not?

A. Yes, sir.

Q. Prior to that time what, if any, experience had you in the telephone business?

A. If you will permit, I would like to start at the time of my schooling and work up to the present time.

Q. Very well.

A. I was graduated from the College of Engineering at the University of Wisconsin in the Electrical Engineering course in 1910.

In 1910 I accepted a position with the Suburban Plant Department of The Chicago Telephone Company. My work [fol. 1645] consisted of inspecting new construction, inventorying plants, and the making of special studies involving telephone engineering questions. My work carried me through the entire suburban territory of the Chicago Company.

I was located in Gary, Indiana, for a period of time as facility engineer and had charge of the preparation of plans for new construction, rehabilitation and maintenance work in the cities of Gary, Folleston, Hammond, Chicago Heights, Blue Island, Harvey, Indiana Harbor, Whiting, and several other smaller exchanges.

In connection with my work at this location I had opportunity to study and watch new construction and observe the cost of such construction.

In 1911, the latter part of the year, I was transferred to the outside plant engineering department of the Central Group of the Bell Telephone Companies then operating in the States of Ohio, Indiana, Michigan, Wisconsin and Illinois.

In this position I inspected work which was completed under jobs; checked proposed new work; designed and engineered new plant; did budget work. As a matter of fact, I made the budget for the Wisconsin Company in 1912.

Q. The Wisconsin Telephone Company?

A. Yes, sir. I made extensive trips through the States of Michigan and Wisconsin relative to a determination of maintenance conditions. I had charge of an extensive plan of new construction and rehabilitation in Indianapolis, the total expenditure approximating a figure of between $400,-

[fol. 1646] 000.00 and $500,000.00. I wrote specifications, made special studies of various engineering problems and started my studies of depreciation.

I also had occasion from time to time to study new construction work, the application of practices which at that time were standard, and investigate the cost of work as it was performed.

In the summer of 1913 I resigned from my position with the Bell Company and entered the employ of the State of Wisconsin as a member of the Joint Engineering Staff of the Wisconsin Railroad Commission and Wisconsin Tax Commission. With these Commissions I inventoried and appraised property of various kinds, primarily telephone and electric light and power properties.

I also acted as engineer adviser to the examiner for the Commission in several cases and assisted the Statistical Department in the preparation of information for the order writer; was engaged in special studies such as bills of necessity and convenience, physical connection, and various operating questions that arose throughout the State from various operating companies.

In this position I had access to independent companies' methods of operation and construction, and also investigated the costs of independent construction work.

I also studied the question of depreciation.

In 1915 I again entered the employ of the Bell System and accepted a position with the Commercial Engineer of the Receivers' Central Union Telephone Company. In this [fol. 1647] position I had a complete insight of the entire Company's activities so far as the question of engineering was concerned. We at that time had a considerable amount of commercial engineering, inventories and appraisals and rate proceedings, the majority of which were supervised partly or wholly by the Engineering Department of which I was a member.

I personally appraised the South Bend Home Telephone Company in connection with the purchase of that Company by the Central Union Telephone Company.

I also made a study of the question of prices paid to the Western Electric Company for materials, as compared with the prices for a like kind of material as charged by independent manufacturers.

I made several studies and inventoried the cost of estab-

lishing business. One case on which I was actively engaged for a considerable period of time was the well-known Peoria case in 1916.

Q. By what Body was that case considered?

A. That case was considered by The Public Utilities Commission of Illinois.

In 1917 I accepted the position of Appraisal Engineer for the Ohio Division of The Central Union Telephone Company, with headquarters at Columbus. While in this position there was a large program of purchase and sales. The beginning of our rate proceedings dated about that time.

I made considerable studies relative to costs both as to operating and construction, prices paid for materials, both to the Western Electric Company and to independent manu- [fol. 1648] facturers; this being necessary because a large number of purchase and sale cases involved independently built properties.

I studied the question of depreciation as pertaining particularly to the property in the State of Ohio and was in touch with the Telephone Engineering Expert's Department of The Public Utilities Commission of Ohio quite frequently.

The inventory and appraisal procedure which the Company at the present time is following probably received its first real consideration back in the years 1917 and 1918 when our inventory program was inaugurated.

In 1919 I was transferred to Chicago as valuation engineer of The Central Union Telephone Company, in which position I participated in practically all valuation work for the entire Company.

I continued my studies on depreciation, the cost of establishing business and the cost of telephone construction. I supervised from time to time the inventory and appraisal of the Indianapolis properties of the Indiana Company and testified in the States of Indiana and Illinois in regard to property values.

In 1921 I moved to Cleveland where I now live, still occupying the position of Valuation Engineer, but of The Ohio Bell Telephone Company, reporting direct to the Chief Engineer.

Since 1921 I have collaborated with Mr. Williams and have worked very closely with him relative to inventories, appraisals, rate proceedings and other questions pertaining

[fol. 1649] to the determination of value of telephone properties.

I am at the present time engaged in the making of a mortality study relative to the ascertainment of service life for various classes of telephone property.

I have analyzed our accounting methods and accounting results; have analyzed our overhead—so-called overhead construction costs; and am continually studying the question from all points pertaining to the ascertainment of property values particularly with regard to telephone properties.

In summarizing, I have been in the telephone engineering business for a period of fifteen years. Included in that period I have valued telephone property to the extent of about $250,000,000.00 to $300,000,000.00 worth. During that period I have studied depreciation for a period of approximately 13 years concentrated on valuation work for a period of 12 years and have studied inventory methods for a like number of years.

Q. Referring to Williams Exhibit No. 3, and for the sake of brevity it would be my suggestion that wherever Williams Exhibit No. 3 is referred to it would be understood as including Volumes 1 and 2; will you tell the Commission what part, if any, you had in its preparation?

A. I collaborated with Mr. Williams ever since Mr. Williams has been appraisal engineer of The Ohio Bell Telephone Company relative to inventory work in the State of Ohio. We have from time to time discussed and outlined [fol. 1650] methods of procedure; we have drawn up routine; we have prepared data sheets, such as Mr. Williams has introduced as his Exhibit No. 4, and generally worked very close together on the particular information shown in his Exhibit No. 3.

From my review of the data both in Mr. Williams' possession and in our files in Cleveland it is my judgment that the inventory which has been presented is an accurate count of property owned by The Ohio Bell Telephone Company in the State of Ohio as of June 30th, 1924, with the exception of two or three accounts, which were inventoried at some later date.

Mr. Dotson: Now I move that the latter part of his answer be stricken out where he gives his opinion as to the correctness of the exhibit. That was not the question. It is not responsive and it is his opinion that we claim is

immaterial. He has not testified yet with reference to it, to show what knowledge he has of it.

Commissioner Poor: I think that may be taken out at this time.

Mr. Burr: Note an exception.

Q. What if any part of the work of making the inventory was done under your supervision in connection with Mr. Williams?

A. The preparation of the inventory for land, buildings, central office equipment; some of the general equipment items were jointly supervised by Mr. Williams and myself, and some of my employes working under my direction assisted Mr. Williams and his associates in the preparation of certain data involved in the inventory. Some of the men [fol. 1651] whom Mr. Williams has in his employ, while I was appraisal engineer of the Ohio Division of The Central Union Telephone Company were in my employ, and I know the limitations and qualifications of these men.

Q. To what extent, if any, have you reviewed the inventory?

A. I have gone through it from page to page with a view of checking and ascertaining whether the tabulation as shown is representative of the property.

Q. What if any corrections of or additions to it would you make?

Mr. Kinnison: I object.

Q. As a result of your check?

Mr. Kinnison: We object. Are they trying to impeach their own exhibit?

Commissioner Poor: I don't believe I got the force of the question; was it that he would make or that he did make before it was submitted?

Mr. Kinnison: "What changes or additions would you make."

By Mr. Burr:

Q. It can be changed to the corrections if any to the inventory or of the inventory or what additions if any to the inventory did you make as a result of your check?

Mr. McConnaughey: We object to that.

Commissioner Poor: Did he make prior to the submission of it?

Mr. Burr: Yes.

Commissioner Poor: The objection will be overruled.

[fol. 1652] Mr. McConnaughey: To which we except.

The Witness: Not any.

Q. The inventory having been made at different times over a period of some years, as testified by Mr. Williams, tell the Commission whether or not as compiled in Exhibit No. 3 it includes any net additions to the property made since the original inventories were taken?

Mr. Shuler: I object. What original inventories?

Mr. Burr: He testified all about the original inventories.

Commissioner Poor: If he knows he may answer; the objection is overruled.

Mr. Dotson: I don't remember of any testimony as to original inventories. They made an inventory as of June 1st 1924, but there is no testimony that that was an original inventory; and that is the inventory we have before us.

Commissioner Poor: But it was made as of June 1st, 1924, by adding net additions and deducting the deductions from prior inventories.

Mr. Dotson: Well, if he is referring to that inventory of June 1st, 1924, that is all right, but he is referring to an original inventory. We don't know what kind of an inventory he is referring to.

Mr. Burr: Wait a minute here.

Mr. Dotson: I will wait two minutes.

Mr. Burr: Let us get down to cases.

Mr. Dotson: That is what I am trying to get to, some cases.

[fol. 1653] Mr. Burr: Let us have the question, please?

(Question read.)

Mr. Burr: You say you haven't heard anything about the original inventories, and we have been talking about them for two days?

Mr. Dotson: I am trying to be frank about it. That is the first I have heard of it.

Mr. Burr: Well, the Commission evidently are not of the same opinion.

Commissioner Poor: Read the question.

(Question read.)

Mr. Shuler: I object, and if it is overruled I except.

Commissioner Poor: He may answer. The objection will be overruled.

Mr. Shuler: Note an exception.

The Witness: It does include necessarily net additions made since the original date of the inventory of the several properties which Mr. Williams has made.

Q. How were those net additions obtained?

A. They were obtained from the Company's records.

Q. Have you the routine for the authorization and reporting of property additions and deductions?

A. Yes.

Mr. Burr: It may be marked for identification as Schneider Exhibit No. 1, and it is offered in evidence.

And thereupon the Document last above referred to is [fol. 1654] offered and admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 1.

Q. Explain the routine, if you please.

A. In order that the company may have an accurate record both as to amounts and as to dates of its construction activities a routine has been established which permits of such information. This routine is established and founded on the Interstate Commerce Commission's prescribed Uniform System of Accounts.

By means of this routine we are able at any given time to ascertain the amount of property added, and the amount of property deducted, the amount of money added and the amount of money deducted, in the construction activities of the Company.

The Exhibit which has just been introduced I have separated into 38 subdivisions. These subdivisions are what we might call the major subdivisions of our routine. There are a considerable number of minor forms and data sheets which are not included. But I think this Exhibit will give a general story of the method whereby the Company keeps track of its property insofar as construction activities are concerned.

Under Section 1 I have the Uniform System of Accounts for telephone companies as prescribed by The Interstate Commerce Commission——

Mr. Burr: Let it be understood that that is offered as a [fol. 1655] part of the exhibit.

The Witness (continuing): Together with a supplement to this.

Under the second item we have "Accounting Bulletin No. 11, Issued by The Interstate Commerce Commission, including interpretations of accounting classifications embodied in the Uniform System of Accounts".

Under Section 3 we have the Company's Bible of Accounting, which is known as Accounting Circular No. 8, and is based on the Uniform System of Accounts as prescribed by The Interstate Commerce Commission.

There are subdivisions of accounts prescribed by the Interstate Commerce Commission in this Circular No. 8.

Mr. Dotson: Is this a revised edition of your Bible?

The Witness: This is a condensed edition.

Under Section 4 I have included the estimate routine for our Company. This pamphlet is a general instruction book relative to the methods and ways of preparing estimates in general, estimate routines, specific estimates and the necessary reporting of expenditures in connection therewith.

Section 5 is an estimate authorization form. This sets forth the money amounts and also a description of the work involved in any given project. These authorization sheets are summarized and carried over to my Section 6 which is a summary of estimates for approval which is submitted to the Board of Directors for their sanction. This is the [fol. 1656] beginning of the construction job.

Section 7 includes a report on the progress of work. This is made out periodically and forwarded to the Accounting Department in order that they may make final charges to the estimate when the same is reported as having been completed.

Section 8 is a copy of our Supplies Requisition. Upon approval of the estimate the people who are to do the work prepare a requisition for materials and forward this to the supply department, who make arrangement to furnish the material at a specified time and location.

Section 9 is a Western Electric Company bill. This bill is submitted by The Western Electric Company and gives us all the necessary information as to the prices paid for the material ordered.

Under Section 10 we have the material disbursement report. The men assigned to perform the work on estimates must be supplied with the material, and the material that

they receive must be properly charged to the job on which they are working. The material disbursement report serves this purpose.

Under Section 11 we have a form giving all the necessary details as to the exchange, the job and the code for all material used on a particular job.

Section 12 is a station apparatus disbursement report. This report is used for the reporting of telephone sets, coil collectors and other similar apparatus. The form is not used in all of our exchanges because the activities [fol. 1657] are such in the smaller exchanges that an ordinary disbursement report can be used.

The reports that I have in here apply particularly to Cleveland, Dayton, Toledo and Columbus.

Section 13 covers the report of conduit and manholes added, removed or abandoned. This form gives the set-up of the conduit and information necessary relative to manholes.

Section 14 is a report of material recovered on a construction job. In practically every construction job there is a certain amount of plant taken down. This is reported on forms and is finally entered on our books as a plant removed item, which is necessary in order to ascertain what our net additions are.

Item 15 is a material recovered and plant displaced report, and is a summary form by areas, job numbers and code numbers. The information as to prices, etc., is entered on this by the accounting department.

Section 16 is a report of material junked or sold at a loss or gain. This is an essential item in the ascertainment of salvage.

Section 17 is a form covering material returned and credits thereon.

All materials returned to the Western Electric Company is itemized on a form similar to this, and we therefore get a credit for such material that is usable. This is also a method of checking up on the total material used on a particular job.

No. 18 covers a daily time report for line and cable splic- [fol. 1658] ing forces. This form is very elaborate and covers practically all the activities involved in the line and cable gangs. This information is kept by job numbers and

the final entries are made after the job is closed and all these forms have been summarized.

Q. Is it kept by code numbers and estimates?

A. Yes, sir.

Section 19 is a daily time report for splicing forces, which is a report of labor.

No. 20 is a time report covering forces other than line, cable placing and splicing gangs.

No. 21 is an individual time summary for weekly payrolls and for some semi-monthly payrolls.

Q. These are all reported by areas, code numbers and job numbers, are they?

A. That is correct; and are part of the records of the company which we have access to at any time whatsoever.

Q. And that applies to all of these reports, does it not?

A. Yes, sir.

Section 22 is a labor distribution summary. The hours shown on all the field time reports are summarized on this form. To the number of hours thus summarized an hourly rate is applied to determine the amount of labor charged to the various codes and jobs by accounting areas.

Section 23 is a payroll voucher for temporary employes. The Company has, besides its straight time employes, employes of a temporary nature, such as might be used in the digging of trench for conduit or where we might have a [fol. 1659] large rehabilitation job in some location which would be too large for our permanent organization to handle.

Section 24 is a form used in connection with right of way. It is a receipt for money paid to various parties for rights granted by them.

Q. Such as pole rights, tree trimming rights and kindred rights?

A. Any right whatosever. Section 25 is a board and lodging voucher. In a large number of cases our employes must pay for their board and lodging, and the Company later on reimburses them for the amount so paid. This form is a detail which the employee makes out and turns in.

Section 26 is a voucher form for expenditures other than for meals and lodging, such as gasoline, paint, sand, gravel or any other material item purchased locally.

Q. Tell the Commission whether all of these forms to

which you are now testifying are used in connection with the reporting of additions and deductions?

A. They are all essential and necessary and are prepared in connection with our estimate routine.

Q. And are they used in that connection?

A. Yes, sir.

Q. Very well; proceed.

A. Section 27 is a Sundry Disbursement Report, which is a summary of vouchers and is a summary of such forms as are included under Section 26.

Section 28 is a further summary of disbursement reports, the use of which is in connection with the work of the disbursing cashier in order that he may be reimbursed for [fol. 1660] funds advanced by him.

Section 29 is a distribution summary. This form is used by the accounting department in summarizing all expenditures other than labor and material expense with their necessary loadings by codes and by jobs and by areas.

Mr. McConnaughey: What are the numbers at the top of those columns?

The Witness: Those are the codes.

Section 30 is a summary by area of charges and credits. This is an office form and is prepared and kept by our plant accountant. This shows a summarization by areas of practically all of the expense involved in a construction job.

Section 31 is a report of wiring units. This report covers inside wires, drop wires and block wires either when they are added, removed or abandoned.

Section 32 is a record of plant units. This record is maintained in order that a proper record of plant units in service may be known at any particular or given time. This information is obtained from the material used form; from the material recovered and plant displaced form; from the report of conduit and manholes added, removed or abandoned; and the reports of wiring units.

Section 33 is the estimate ledger sheets. After the final monthly summaries have been completed showing the various charges to the estimates or jobs they are transcribed or permanently entered in the estimate ledger. There are six sheets which, taken as a whole, give a survey of the

[fol. 1661] entire job so far as costs are concerned and so far as measurements are concerned.

Q. By measurements you mean quantities?

A. Quantities added, subtracted and abandoned.

Section 34 is a form showing transposition of completed work from Account 104, being the account for construction work in progress, to the fixed capital accounts. These transfers are made upon receipt of information from the field that a certain portion of plant being erected under a construction job has been installed and cut into service. This is necessary in connection with the determination of interest during construction.

Section 35 are our forms for journal entries, and cover the total expenditures incurred on the job, the extraordinary repairs charged to the reserves, the transfers from construction work in progress to fixed capital accounts and the amount of plant displaced and the salvage recovered.

Q. Are the figures under the headings marked "Main" intended to designate the main accounts? I am now referring to Section No. 35?

A. That is the main account to be inserted, and then we have the sub-accounts in accordance with our Circular No. 8 which are printed in.

Q. The sub-accounts appearing under the word "sub" in each instance?

A. That is correct.

No. 36 is a preliminary completion report. Upon completion of the physical work in the field all departments involved are informed, which then gives them the oppor- [fol. 1662] tunity of reviewing such work and ascertaining whether the work was done in accordance with the plan and outline.

Section 37 is a final completion report. Upon notice of completion the charges to the job are analyzed, and, if necessary, corrections made, when the final figures are then forwarded through the lines of organization to the officers of the Company for final approval.

Section 38 is a summary of completed jobs for approval of the Board of Directors.

So, taking the routine in its entirety, it commences with the authorization of an expenditure by the Executive Committee or the Board of Directors and finishes with the O. K.

and approval of the Board of Directors after the job is completed.

Q. Tell the Commission whether all of the property of The Ohio Bell Telephone Company added since the respective inventory dates is shown on the records of the Company in and by forms similar to those conrained in your Exhibit No. 1?

A. It is.

Q. In addition to the items of physical property listed in Williams Exhibit No. 3, for example, a single pole, what inventory factors are associated with such an item or items?

A. In the establishing of an inventory routine and the determination of the items to be considered, it is understood that the listing of, for instance, a pole, not only involves the material item of wood, but it involves the labor of placing that pole; it involves the material not only of the pole itself but of the creosoting, the painting, the hub [fol. 1663] guards, the cribbing guards, the butt steps and other appurtenances. It involves the consideration of freight from the source of the pole to the location at which it is erected. It involves any charges which are made for the inspection either at the woods or in the poleyards of the supplier. It involves any service charges which may be incurred. It involves a consideration of what we call supply expense, or the expense incurred by our own organization in taking care of the material item of poles, and its appurtenances. It involves a consideration of the plant supervisory forces who direct and supervise the direct labor involved in setting that pole and attaching its appurtenances. It involves a consideration of the tool expense, or, in other words, the wear and tear and depreciation of tools used in the installation of that pole by the Company.

It involves any incidental expenses which might be incurred by our people in erecting that pole.

It involves the consideration of garage expense and items of that character.

Over and above these items we have the item of omission from the inventory of a certain number of poles. We have to consider the engineering features connected with the erection and location of that pole. We must consider the interest on the money invested in that pole and the labor in connection therewith during the time of erection.

We must consider the taxes which are paid on that pole

while it is under construction or in the process of being erected.

[fol. 1664] We must consider the expenses of our general officers who are acting in a supervisory capacity to our engineering department, and we must also consider the business of the Company as a whole as related to that pole.

Q. What about the working capital as represented by the pole?

A. We must carry a reasonable amount of working capital, that is, cash and supplies, in order to transact our business in an economical manner, and also provide a reasonable amount of funds or materials to provide for any contingencies which might occur in connection with that particular pole.

Q. You are using a pole for the purpose of illustration?

A. Yes, sir,

Q. Would the same consideration apply to all of the property?

A. To each and every item of property contained in the inventory, yes, sir. In enumerating the items that I have just mentioned all of them are considered and specified in some manner or form by the Interstate Commerce Commission in their Uniform System of Accounts.

The item of omissions, so far as reporting the work is concerned, relative to our estimate routine, there is no such item, because all items as disbursed and as recovered are reported on these sheets and there would not be any omitted items. There would not be any stolen items or any strayed items because the material ledgers must balance at all times, and such balancing necessarily would take into consideration the items I have just mentioned. However, in making an inventory it is humanly impossible to count [fol. 1665] all of the items. There necessarily are omissions, there being omissions of two kinds. There are omissions of oversight and there are omissions due to the instructions to the field forces of omitting certain items on account of their smallness.

We have omissions due to concealment. That may be demonstrated or explained by taking a pole which is set in concrete. The concrete is not evident to the inspector. Neither are planks used at the bottom of poles for anchorage purposes visible to the field inspector, without he excavate at the butt of the pole to ascertain the existence of

these creosoted planks, which would be a laborious and expensive proposition.

We have the omissions of sag in pole wire and cables. The inventory men measure the distance between poles on the ground, which does not take into consideration the sag of the wires, which sag forms what is called the catinary curve calculus.

Neither are items which have been stolen, which have been lost or broken at the time of construction, visible or obtainable by the man who goes out to make an inventory.

Mr. Dotson: If he stole them he would know where they where, wouldn't he?

The Witness: He might or might not.

We have the omission of extra handling charges. That particular item is more pertinent in the discussion of costs rather than inventory, although it probably should go into the discussion at this time.

[fol. 1666] We have the omission of all other transportation costs other than the straight freight costs which we will use in developing our appraisal. In developing our appraisal we shall use carload lots and we shall use freight classifications which are representative. However, in the construction of a telephone property we sometimes and often do pay, rather than freight, express charges in order that the shipments may be speeded.

I think that all of these items must necessarily be considered in an inventory in order that the inventory may be complete with respect to that particular item.

Engineering is properly a part of the inventory because it does represent property.

Each and every item listed in Mr. Williams' Exhibit No. 3 includes its portion of engineering just as well as it includes a portion of direct labor, material and other items.

The Interstate Commerce Commission in its Uniform System of Accounts recognizes the existence of such property.

I would like to take up at this time the various kinds of engineering which our Company does, has done and is doing at the present time. We have commercial engineering.

Commercial engineering, primarily enters into our problems in the determination of future population, the rate of growth of communities both from an industrial standpoint and from a per head standpoint.

Mr. Shuler: I thought the General Staff did that for you?

[fol. 1667] The Witness: They make a house count, at which time they estimate the kinds of service which the inhabitants of a locality might use. They ascertain from this house count or canvass the rental value of the property and obtain certain service statistics. The future population is ascertained by a review of past growth and a review of the industrial activities of the community.

The population of a town is divided into sections and these sections into what is called market areas. The market area may be large or small depending upon the density of population, and it also will contract with an increase or decrease of service demands within that area.

These population estimates are based on the number of families, allocating a certain number of people to the family, which allocations are based on vital statistics of the United States Government.

The kinds of service which a certain community will take or will have offered to it are based on a rate plan study.

From this fundamental plan data the number of lines and stations in each city block are determined.

The demands of service for six, twelve and twenty years in the future are also indicated on this study.

Before final classification of service is made a rate plan study is prepared which consists of comparing the results of applying several kinds of rate structures to the possible business to be secured in a community. For instance, one study might involve one and two party residence telephone [fol. 1668] service only. Another might involve one, two and four party service only. Another would involve flat or message rate business service or a combination of all three.

Different rate schedules will produce different amounts of revenue. However, in order to put the studies on a comparable basis, the expenses, annual charges, carrying charges and other costs for the various plans must be considered and balanced.

From these various studies a rate structure and schedule is adopted which will permit of the furnishing of subscribers with a maximum of service at a minimum cost. The fundamental plan is necessary in order to show the most economical number, size, location and arrangement of central office districts in a given city.

Q. In general, how does fundamental plan engineering differ from commercial plan?

A. The fundamental plan is part of the commercial activities and is done by the commercial engineering staff.

Mr. Leach: May I break in here with the first question that I have asked so far in this whole hearing?

Mr. Burr: Yes, it will not be considered a breach.

Mr. Leach: Do the engineers of The Ohio Bell Telephone Company perform such service, or does the Staff of The American Telephone & Telegraph Company perform that service? I have a recollection of hearing Mr. Rhoades testify in this room that this work was done by the Staff of The American Telephone & Telegraph Company.

[fol. 1669] The Witness: Oh, The American Telephone & Telegraph Company are engaged all the time in the making of those studies. But our engineering department are working with them all the time. They may send out one or two men to supervise the job but we will provide most of the assistance in the way of labor and help.

Mr. Shuler: Somebody testified here just within a few weeks that he got his statistics as to the population growth of metropolitan Cleveland from The American Telephone & Telegraph Company in New York?

The Witness: That probably may be true. I did not say we made up the population statistics. They are obtainable from the Government and from various other sources, but they are used by our people.

Mr. McConnaughey: You are testifying, as I understand it, now, in effect, that all of these things you are telling are in this property?

The Witness: Yes, sir, I am trying to outline what would be involved in the way of engineering to reproduce a property such as The Ohio Bell Telephone Company has in the State of Ohio.

Mr. McConnaughey: I do not think that is the question that is before us. It is not what would be involved but it is what is involved.

The Witness: Well, I will put it, what is involved in the reproduction of a property of this size.

Mr. McConnaughey: Does that mean that some of the service rendered under the License Contract is in this [fol. 1670] property—in the inventory?

The Witness: The engineering which our people have done is in this property. The engineeering which The American Telephone & Telegraph Company do and have done is carried as a deduction from revenue and on our books does not show as a fixed capital account.

Mr. McConnaughey: No duplication there of effort, is there?

The Witness: No, sir, none whatever. The engineering which I will testify to later on in connection with the appraisal will not contain one penny's worth of expense of The American Telephone & Telegraph Company, but will be expenditures made by The Ohio Bell Telephone Company in connection with their own engineering work.

The number of lines and stations in any city block are plotted on a large scale map. Then stidies are made to ascertain or determine the most economical method of serving the city, either from one central office or from a number of central offices, taking into consideration the annual charges for building, central office equipment, outside plant, maintenance costs and costs of a similar nature.

The existence of present offices must be taken into consideration in such a study.

After the number of offices has been decided upon, routes of future underground conduits and the number of ducts, allowing one duct for emergency purposes and one duct for city use, must be provided in each section and the size and amount of conduit is based on the number of lines and [fol. 1671] stations in each block of the area to be served at the ultimate period which is a period of from 20 to 25 years in the future.

This plan furnishes the key to the rate of growth to be expected for which plant must be provided in the immediate future.

In all plans made for the extension and rehabilitation of property the fundamental plan must always be considered in order that the additions to the present property will gradually fit into what ultimately is planned to be an economical telephone plant for the given city.

It would not be economical to provide all the plant which we feel is necessary to give service to a particular city for a period of 20 to 25 years in the future. We therefore prepared a program study.

Now I might say that these factors which would be de-

veloped in a program study are factors tending to increase the annual rate of depreciation because plant is not designed and placed in all respects for a period of 20 to 25 years. I know of cases where plant is placed with the idea of serving the locality for a period of three to five years, at which time it is expected that such plant will be removed and plant of a different type installed in lieu thereof.

To secure the economical balance between the subscriber cables and the trunk cables, which trunk cables are indicated by our fundamental plan, it is necessary to make a loop and trunk study. This loop and trunk study involves a study of the annual charges as between subscriber [fol. 1672] cables and trunk cables and these charges are based upon the actual existing conditions as of any given date.

In all causes of such a study the existing plant must be considered. The application of a loop and trunk study has three purposes or uses; first, indicating the design of interoffice and toll switching cables.

Second, indicating the design or network of subscriber cable plant; and,

Third, to determine instrument zoning; that is as to the use of a correct type of instrument in certain locations to secure the proper transmission.

I think that in a general way covers our commercial engineering activities.

Q. Is the commercial engineering to which you have testified not only reflected in the present plant, but would it also be present in like manner in any reproduction of the plant?

A. Yes, it would. We also have another class of engineering which is just as important and fundamental as the commercial, and that is the traffic engineering.

The traffic engineering department is responsible for initiating recommendations for central office equipment and interoffice trunks to take care of future requirements. It is necessary to schedule equipment in connection with our larhe exchanges and to schedule such equipment for a period of two or three years in advance of the date for which such equipment is needed. In order to anticipate such needs statistics and information pertaining to past growth, present conditions and expected future growth are [fol. 1673] maintained, The commercial department's pre-

diction of future growth, the calling rates per station for the various classes of service and the station capacities of the existing equipment are constantly reviewed and revised in accordance with the latest information and data available.

The calling rate is secured from peg counts made periodically, with the exception of the smaller exchanges, the period usually being one month. This peg count information is prepared in the Division Office and forwarded to the traffic engineers in the General Offices at Cleveland.

The preparation of a traffic order, in addition to considering the amount of equipment, involves the type and the arrangement of such equipment in the building. Where the plan of procedure is not evident or obvious it becomes incumbent upon the traffic engineering department to make comparative cost studies in order that a proper plan may be devised—a proper and economical plan may be devised.

These studies involve labor and expense in excess of the labor and expense of actually preparing the traffic order.

In order that the type and size of the central office building may be known to the building engineer, the traffic engineering department furnishes a study of the switchboard operator's requirements for 10 and 20 year periods in the future. These studies are based on the station development indicated in the fundamental plan previously discussed.

In this connection future calling rates, loads and possible reclassification of service must be considered.

[fol. 1674] Machine switching equipment is ordered and scheduled, as was referred to previously.

The considerations involved in determining the amount of machine switching equipment are dependent on the calling rate and the holding time for the various classes of service. This usually involves the making of comparative cost studies in order to determine the economical grouping of switches. A machine switching traffic order usually considers and includes a considerable amount of manual equipment also.

The preparation of traffic engineering data for 10 and 20 year building periods involves approximately as much work as the preparation of a traffic order covering the initial period or initial installation.

The traffic engineering department, in order to furnish

this information, must maintain current studies and interoffice trunks. Such studies require compiling and applying such traffic data as calling rates, holding time, community of interest factors and similar items.

It is a function of the traffic engineering department to establish the proper standards for operators' quarters and to furnish such quarters, which comprise the rest room, cafeteria, locker rooms and quiet rooms, with the necessary appurtenances and conveniences.

In connection with the larger type of central office it is necessary also to provide for the training of operators, the layout of which depends upon the size of the exchange, the classes of service, the turnover in operators and the number of operators required to handle the service.

[fol. 1675] Incident to the fundamental plan the traffic engineering department furnishes complete traffic data relative to interoffice trunk requirements; switchboard requirements for each of the plans and years under consideration.

Traffic data is also furnished for general studies such as zone rate studies, general traffic studies, machine switching versus manual studies, five year program studies and other engineering investigations. Such work requires that a complete record of statistics be maintained and kept up at regular intervals in order that the information furnished in regard to these studies is up to date and reliable.

That, in a general way, covers the engineering phases of the traffic department.

We have a building and equipment engineer reporting to the chief engineer.

Preliminary to receiving a traffic order covering a certain job, it may be necessary to prepare studies covering several methods of relief so far as housing conditions are concerned in regard to equipment. After these conditions are investigated a traffic order is prepared and sent to the equipment engineer who takes this order showing the required multiple, answering jacks and positions and proceeds to lay out the equipment and its associated apparatus in the most economical arrangement possible in the office then existing.

In the case of new offices the building department, in conjunction with the engineer handling the equipment, de-[fol. 1676] signs the building so as to allow for the most economical arrangement of the equipment and associated

apparatus for a period of from 15 to 25 years. Extensions, rearrangements and other possible changes in the equipment and associated apparatus are considered in planning the economical arrangement of the equipment for both the initial and ultimate requirements.

Jobs engineered on either a manufacturer-furnished-and-installed basis, or on a telephone company-furnished and a manufacturer-installed basis, the telephone company's engineers furnish specifications covering the quantities and type of apparatus required and skeleton drawings for floor plans, frames and racks showing the apparatus locations required.

On this basis the manufacturer proceeds and installs the particular job.

On a telephone company-furnished and a manufacturer-installed basis the telephone company's engineering is extremely detailed, in that the specifications from which the installer works cover every detail necessary for him to make the installation as desired by the company.

The drawings prepared by the telephone company are in the minutest detail, showing all the dimensions for cable runways, location of the apparatus on the floor and for each item of apparatus shown in its particular location, in order that all pieces and items may function as a whole.

In this connection the equipment engineer also does detailed engineering in the development of circuits necessary [fol. 1677] to function with existing apparatus or use existing equipments for which no circuits are available.

The equipment engineer prepares a detailed layout of the building, locating the equipment with regard to the immediate and ultimate occupancy. He also lays out operators' quarters based on the traffic department's recommendation of requirements.

During the progress of the installation the equipment engineer keeps in touch with the job to see that it is going in properly and to interpret all questions raised by the installer or manufacturer.

It is also his function to review the detailed traffic orders which are made up by the traffic department, by the traffic engineering department, on the basis of commercial surveys or forecasts, and to make his recommendation and offer his suggestions as to the types of equipment to be installed. He may also offer his suggestions as to the

changes in a traffic order relative to a change in the design of equipment, having in view an economical installation and at the same time one which will in the future fit in with new additions from time to time.

The equipment engineer also prepares the specific estimates on which authorization for the expenditure of money is given. These estimates are prepared on the basis of an analysis of the cost of past jobs, all of which data is available through the analysis of work done and the costs of which are kept as outlined in my Exhibit No. 1.

He also takes into consideration the present-day cost of [fol. 1678] labor and its probable trend over a reasonable period in the future, owing to the fact, as stated before, that equipment must be ordered from two to three years in advance of the need therefor.

He schedules all equipment with the manufacturer and places the orders with him and follows the same through to its delivery. He checks all bills, reviews all contracts submitted by the manufacturer and disposes of all excess material or material recovered at the completion of a job to the best advantage to the Company.

The building engineer is responsible for the design and type of new buildings. He is responsible for the check for floor loads on existing buildings where additional central office equipment is to be installed. He must supervise during the construction on new and existing buildings. He must prepare plans and designs for new buildings and it is his duty to keep up to date relative to the costs of building construction in order that in securing authorization by the proper officials of the Company he may be able to present a reasonably accurate figure of the cost of the proposed structure.

That, in a general way, covers the equipment engineering activities.

Another phase of engineering, which probably is as important as any, is the outside plant engineering.

The plant engineer prepares the plans for all the extensions of outside plant. He exercises general supervision over the use of such plant. Where a fundamental [fol. 1679] plan is available from which plant engineering work is to start the duties of the plant engineer are about as follows:

The general layout and plan of the telephone system to

be built is first developed, using the fundamental plan as a basis. The developing of this plan involves detailed field inspection of the physical conditions obtaining where the plant is to be built. A general pole plan study and layout and general aerial feeder and distributing study and layout, and a similar study for the underground conduit and cable is made.

After these studies have been completed studies of various types of plant against each other and a temporary against permanent plant condition is made. After this study and information is completed the detailed field work starts. This work results in notes for detailed pole plans, considering anchorage, distribution, hazard, physical interference, and pole spacing. At the same time notes for aerial cable plans, considering permanency of terminal locations, tree conditions and wiring limits of terminals are made.

The aerial wire plans developed from field notes consider whether wire is temporary or ultimate, and the ultimate load to be carried on a line, together with tree interference and clearances.

I might state here that the outside plant engineer is one factor to be considered in the question of depreciation. He designs plant which is economical. It may be that the use of cable in one location for a period of five years, after which time it will be removed, is an economical procedure. [fol. 1680] He may plan wire to provide facilities in a certain locality, knowing that such wire may only be up three to five years, at which time it will be removed, and this may be an economical procedure. At the same time the life of that particular plant in one location is very short.

I think this type of engineering which is proper is one factor which has been overlooked generally in the question of depreciation. We know and do engineer not for the life, the actual physical life of a particular piece of apparatus, but do engineer, with the idea of economical periods of service in a particular location.

In considering the design of underground conduit plant the outside plant engineer must recognize and take into consideration sub-surface structure, manhole locations and lateral locations.

Many a plan has been revised owing to the inability of the Company to provide a location in a street or alley for

conduit on account of the number of existing sub-surface structures. When such is the case, the fundamental plan must be revised in order to provide for this deviation.

The underground cable plans involve the study of cables, the layout of laterals and the future relief methods.

In the racking of cables in manholes, for which the outside plant engineer is responsible, care must be taken in order that future cables may be taken care of without disturbing the general lay-up of cables already existing.

To develop plans for building and block cables it is [fol. 1681] usually necessary for our plant engineers to cooperate with architects in order that the telephone company's requirements may be provided in a sufficient amount and in the proper location.

Mr. Kinnison: I want to interrupt. This engineering testimony on this will be offered again on the valuation, won't it?

The Witness: Well, it can be referred to in the valuation, yes.

Mr. Kinnison: You are giving it for the purpose of showing the value of this engineering service?

The Witness: I am giving it now because I believe it is a part of the inventory. It is proper. Later on I will testify as to the amounts which I believe are proper for engineering charges and will analyze the Company's expenses incident to those charges.

Mr. Kinnison: Based upon the testimony you have been giving now—I only have this in mind, may it please the Commission; it seems to me his testimony for the last half hour has gone to the value of the service rather than to the inventory phase of it. The engineering fact, I judge, is what we are interested in today, and that services were rendered, and such detailed testimony as to the kind and character may properly come in under the valuation of those services.

Mr. Burr: No. He is testifying now to the character and kind of engineering which exists in the plant and which would have to exist and be provided in a reproduction of [fol. 1682] the present plant.

Now addressing myself to your question, Mr. Kinnison, whether this testimony would be all gone over again when it comes to the matter of valuation, it will not. We may refer to some of this incidentally, but my purpose now is

to describe the character of the engineering, in order that we won't have to do that again when the property is evaluated.

Mr. Kinnison: Well, I had in mind the duplication of time on the proposition.

Mr. Burr: We feel that the valuation will go much faster for that reason.

Mr. Kinnison: I have no objection to it.

Commissioner Poor: I guess that is a good stopping place.

Mr. Burr: Are we going on tomorrow or not?

Commissioner Poor: We will finish up. We would like to have all your testimony in at this time and then they could have it to go over.

And thereupon the further hearing of this case was adjourned until Wednesday, January 21st, 1925, at ten o'clock A. M.

[fol. 1683] Morning Session

Wednesday, January 21st, 1925.

And also W. G. Schneider, resuming the stand for further examination in chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Q. At the close of yesterday's hearing you were discussing the item of plant engineering; will you proceed with your discussion?

A. After the general considerations have been given to the various items as developed from the field inspection and field notes made by the engineer, a further study is made regarding the method of future relief, the multipleing of cables, the assignment of counts to cable terminals, and the assignment of counts to stub cables.

A study relative to the zoning of instruments is also made. This takes into consideration the distance from the central offices and the so-called and well-known engineering term of loop resistance.

The instruments are of different types. Subscribers located near the office having a low subscriber loop resist-

ance usually are provided with a certain type of instrument. Subscribers located at a distant point from the office, having a great subscriber loop resistance, are provided with a different type of instrument to overcome some of the losses [fol. 1684] due to this resistance.

A study is made as to the guage of cables. Where the subscribers are located at great distances from the office it becomes necessary to instal- cables and wires of a guage larger than commonly used. In some cases a question of loading cables must be considered.

The plant engineer or man responsible for the design of plant must see to it that standard specifications are followed, and it is necessary that he inspect the work from time to time and finally O.K. the work after it has been fully completed.

It is necessary for him to make a report covering the conditions encountered during the construction of the job and give reasons for any deviation which might occur over the original plans.

He is responsible for the making of changes of plans due to inability to secure right of way or due to a change in physical conditions occurring after the original plan had been prepared and approved.

He is responsible for and does keep a complete outside plant record. These records consist of pole lines, aerial cable, underground conduit and underground cables, cable conductor assignments and many other miscellaneous details.

After a particular job is completed the plant engineer is required to prepare what is known as the completion report, giving a complete analysis including an analysis of the cost. In this way he is kept in touch with current costs of [fol. 1685] doing work and is in position to furnish the executive committee with the cost of proposed new work.

Outside plant engineering must be performed in such a way that it is possible to talk at all times easily and satisfactorily not only between stations of one exchange but as between the stations of one city and another located not only in the State of Ohio but in any other state of the Union and Canada. This is a problem where, in a telephone plant which is operating and new construction is being car-

ried on continually, in many cases it requires difficult engineering feats.

In connection with the outside plant work there is the particular kind of engineering known as transmission engineering. This engineering is necessary in order that the proper equipment is provided and also that the equipment is of the proper standard.

Incident to plant engineering we also have the protection engineering. This engineering involves the protection of telephone plant so that there is no danger either to the property or life of any citizen, but it also protects the employes of the Company and the property of the Telephone Company.

We must also engineer certain telephone property in connection with other foreign wire using companies. It is necessary that certain specifications and standards be followed in connection with high tension power lines; this to eliminate two things; one is the induction from the high tension lines and the other is the hazard to life and prop- [fol. 1686] erty incurred through being close to the high tension wires.

As is the common practice in any profession it is necessary that the engineer must be up-to-date and well-informed as to the latest types of construction and methods involved. Our engineers are constantly studying and experimenting with the view of building telephone properties more economically and at the same time more efficiently.

The engineering work at the present time is being concentrated on the subject of transmission and the development of new apparatus.

We are also engaged at the present time in making studies as to the proper guage of cable conductors, loading and vacuum repeater operations.

The Ohio Bell Telephone Company is operating on the budget system, and in connection with this all new money required for new construction, extensions and rehabilitations is estimated and computed by the engineering departments and at the present time the engineering department of The Ohio Bell Telephone Company consists of 101 employees under the chief engineer; consists of 190 engineers known as the plant engineers; it consists of 36 employees engaged in general traffic engineering work, and consists of 27 employees engaged in what I have called commercial engineering.

Mr. McConnaughey: Did you say 101 employe-s or engineers? I understood you to say engineers.

The Witness: Employees in the chief engineering department, 101 employees including the chief engineer.

[fol. 1687] Mr. McConnaughey: And the next number was 190 engineers?

The Witness: Plant engineers.

Mr. McConnaughey: And those are engineers?

The Witness: Yes, sir.

Mr. Dotson: And 36 general traffic engineers?

The Witness: Well, I don't mean that all of those are engineers; these are the number of employees in the engineering department.

Mr. McConnaughey: Well, you said engineers.

The Witness: Yes.

Mr. McConnaughey: I just wondered whether you meant that.

The Witness: If I may I would like to briefly summarize the engineering activities of The Ohio Bell Telephone Company, engineering for the year 1924.

Our commercial engineering department prepared local exchange tariffs for 50 exchanges and prepared one toll tariff.

We completed a new general exchange tariff which was filed with the Commission on December 1st, which tariff cancelled all former general tariffs then existing. The new toll tariff was filed on December 21st of 1923. This tariff required the rescaling of all exception rates for all Ohio rate centers.

Mr. Dotson: How do you happen to include that in your engineering work for the year 1924?

[fol. 1688] The Witness: Well, the tariff was filed in 1923, but during the entire year of 1924 work was done in connection with it, rescaling of it.

Mr. Dotson: What kind of work?

The Witness: The rescaling and preparing of new material for offices throughout the State of Ohio in connection with that tariff.

Mr. Dotson: Well, the preparation of the tariff, however, was the principal item of work, wasn't it?

The Witness: Well, after the tariff was prepared it was then necessary to issue instructions and details and a multitude of miscellaneous items for our individual exchanges

throughout the State in order that they might comply with the new tariff.

Mr. Dotson: Wasn't that worked out with the tariff while it was being prepared and all given out at the same time in order that the tariff could go into effect at all?

The Witness: Oh, no, no; a large amount of the work was done during 1924. In connection with the work on the new exchange tariff a special commercial instruction covering the administration of the various regulations contained in the new tariff was prepared. These instructions were issued to our field people as a guide and help in the administration of tariff problems.

Provisional estimates as to the amounts of revenue for each year from 1925 to 1929 inclusive were made, and in the preparation of these estimates an extensive study was made of the revenue obtained during the past three years. [fol. 1689] Mr. McConnaughey: It seems to me this particular part of the testimony is directed to operating expenses rather than capital.

The Witness: If I may explain, I have testified to a large number of studies which the engineering department makes, and this provisional estimate estimating the revenues——

Mr. McConnaughey: Well, I am speaking particularly of just what you have testified to about tariffs now. I thought you were through with that.

The Witness: Well, the tariff is developed after a considerable amount of study. It isn't anything that pertains to operation itself; it is an engineering problem.

Mr. McConnaughey: Well, it is a basis for operation.

The Witness: It is a basis for operation, yes.

Mr. McConnaughey: For an operating expense.

The Witness: But a certain portion of the engineering expense involved in this is charged to fixed capital and is not an operating expense.

Commissioner Poor: It impressed me that way and I just wondered; doesn't most of this testimony go to the establishing of the value of the engineering service rather than to the item of proving that there is such an item as engineering?

Mr. Burr: If Your Honors please, this is all engineering which exists in this property, all of it.

Commissioner Poor: Well, that might be, but does not [fol. 1690] all this testimony just go more as to the value of that?

Mr. Burr: At a later time we expect to evaluate the engineering and the engineering services. But at this time we are trying to show not their value but what those services are and their actual existence and the fact that such property as is represented by those services inheres in this telephone plant.

Mr. Dotson: Yes, but we are not engaged now in any part of the hearing that involves the operating costs.

Mr. Burr: We are not talking about the operating costs. We are saying that here is engineering which, in order to complete an inventory of the property, must be shown and should be shown at this time. It is actual engineering which——

Commissioner Poor: You claim that it would be engineering necessary prior to placing the plant in operation if it were newly constructed?

Mr. Burr: Yes, sir, and the witness will so testify if he is permitted to proceed.

Mr. Dotson: It seems to me that the description he has given here of the activities of the engineering departments includes everything that those departments are doing. Now it certainly cannot all be work that goes into capital account —new construction.

Commissioner Poor: He is now testifying as to the engineering activities that were carried on last year and in 1923, not in building a new plant, but creating tariffs and schedules of the existing plant.

[fol. 1691] The Witness: Mr. Commissioner, our engineering of course is all chargeable to fixed capital. A certain portion of it goes to operating expenses. But there is a certain portion which goes to the fixed capital account.

Mr. Burr: That is, a certain portion of what you have been describing?

The Witness: Yes, sir.

Mr. Dotson: Then we should have that portion and nothing else.

Commissioner Poor: No portion of this work on your new tariffs would go to fixed charges, would it?

The Witness: Oh, yes; because in connection with the preparation of a general tariff a considerable amount of study and rate program work must be done. If we were to reproduce our property today it would be necessary to do the same thing. We would have to study the situa-

tion from an engineering point of view before we could ever prepare a tariff.

Mr. Hagelbarger: May it please the Commission, wouldn't that be a study resulting from the experience of operation? As they go along they study the situation as developed by their operating experience. Now it seems to me that that is what this deals with.

Mr. Burr: Mr. Hagelbarger's point is answered by this query: In the event you were reproducing this property, what experience would you have on which to base your rate studies? None whatever—none whatever.

Mr. Hagelbarger: Then you couldn't put engineering [fol. 1692] into it, could you, originally?

Mr. Burr: It would require just the sort of engineering that the witness has testified to in order to properly prepare those rate schedules.

Mr. McConnaughey: He has been testifying to the revision of existing rate schedules and that is not part of creating a new plant.

Commissioner Poor: That is the part that would be objectionable. Of course I think they have a right to show those features of the engineering which referred to and which would be necessary in building a plant originally, but limiting the testimony to that. And with that understanding, that it will be limited to that, and considered for that purpose——

Mr. Dotson: Well, now, Mr. Commissioner, wouldn't this be the line then that this testimony should take; that he should only be permitted to testify to that feature of engineering that he knows was carried into the capital account?

Mr. Burr: No; that would not necessarily follow.

Mr. Dotson: Yes, it should, because otherwise we have no line of demarcation; neither are we in a position to place it. He is put on here as a man possessing all the knowledge concerning this work and why they are introducing it. They say they are introducing it for the purpose of showing what portion is in capital account. If they are going to show that at any time why not show it now?

Commissioner Poor: It might be in order when it came [fol. 1693] down to the question of putting the valuation on the engineering, that that would be time enough to raise that question. I do not believe this witness should be lim-

ited at the present time to testifying to only those items that he knows have gone into it in order to prove that there is such a thing as engineering in a plant; that, qualifying as an expert engineer, if he knows that certain items are necessary to go into a plant, in proving that there is such an item there; it might be later on that your objection would be well taken, when it comes down to the question of putting a valuation on it.

Mr. Dotson: Well, the reason I raise the question in that form right now is that it seems to me it would furnish us a means of knowing what testimony should be given right now. I don't know just how we are going to determine to what extent we will let him continue to testify on this line unless we just let him testify along the line that he is framing his testimony on.

Commissioner Poor: With the understanding that the Commission is only going to take into consideration those things that refer to engineering which was required to build a plant and put it in operation.

Mr. Dotson: Well, that is where we will have to land in the end.

Commissioner Poor: Yes.

By Mr. Burr:

Q. Proceed.

A. During the year 1924 a complete economic survey of the State of Ohio was made by the commercial people. [fol. 1694] Portions of this survey were printed in the papers throughout the State of Ohio. The survey was made for the purpose of distributing estimated future population and was made in cooperation with The American Telephone & Telegraph Company.

Population and station data, for the toll fundamental plan were completed——

Mr. Dotson: When was that completed?

The Witness: During the year 1924. The population data for this work were taken from the economic survey data, and stations were estimated on the basis of development per 100 population.

Population studies of Dayton and Canton were made and long-period station forecasts were prepared for these places on the basis of estimated population.

A study was made for Toledo along the same line.

The complete engineering activities for the year 1924 consisted in a preparation of 14 estimates covering new buildings, additions to existing buildings and other miscellaneous work in connection with such buildings.

Typical of these estimates I might mention plans and specifications for the new main office at Canton; the work in connection with our new main office building in Cleveland.

Besides these 14 major operations the building engineering department participated in 21 other operations of some magnitude, such as the making of inspections of our various buildings for the advisory work in connection with architects and contractors.

[fol. 1695] Our manual central office equipment engineering work consisted in the preparation of 40 specific estimates, 95 job orders and 20 routine orders.

During the year 36 preliminary completion reports and 20 analysis reports were made.

In the mechanical central office equipment provision of the engineering about 70 jobs and routine orders and 18 estimates were prepared during the year, which does not include the amount of work which has been done in connection with the machine switching study in connection with Cleveland.

The outside plant engineering may be summarized into a checking of about 120 outside plant estimates and about 30 to 40 job orders per month. Of the checking, 30 of the proposed jobs were checked in the field before the work was started, and 10 were checked during the progress of the construction work.

Q. Can you give the Commission any estimate of the amount of work involved in these jobs that you speak of?

Mr. McConnaughey: Now you are going into the value, aren't you?

Mr. Burr: Not the value of the service, but simply to show the size of the work.

The Witness: The magnitude of the jobs would run anywhere from $200,000.00 down.

Mr. Dotson: Mainly down, or mainly $200,000.00?

The Witness: Well, when I say "estimates", those would [fol. 1696] run into hundreds of thousands. The job orders would be something less.

Mr. Dotson: How much less?

The Witness: Well, it will range from $2500 up.

Mr. Dotson: How do you distinguish between job orders and estimates?

The Witness: At the present time jobs I believe are $2500.00 and less. Estimates are for anything over $2500 of expense; the difference between the two being that the estimate requires the authorization of the Board of Directors or Executive Committee, whereas a job order does not require that authorization.

Mr. McConnaughey: It is a matter of size more than anything else?

The Witness: That is correct; magnitude or amount of money to be expended.

Mr. Dotson: It has nothing to do with the kind of work?

The Witness: No, sir.

Mr. Dotson: It just depends upon the cost?

The Witness: That is correct.

A large amount of work is done in connection with the designing of cable vaults, tool design and material testing.

The Columbus fundamental plan was completed during the year 1924. A large number of comparative cost studies as between manual equipment and the panel type equipment [fol. 1697] were made in connection with our Cleveland properties.

A comparative cost study of manual versus machine switching in Akron was made.

Cost studies were made and prepared regarding the abandonment of a large number of small exchanges.

Mr. Hagelbarger: I object to it, Your Honor. This is clearly operating engineering.

Mr. McConnaughey: This is not construction; this is distribution.

Mr. Hagelbarger: Abandonment. All these things, if they are reproducing the property new——

The Witness: That does not necessarily mean, Mr. Hagelbarger, that we anticipate the abandoning of service. We may decide to abandon the exchange at a particular location and feed that service out of another location, and that requires comparative cost studies as to the amount of plant involved in either plan. I think that is vitally pertinent.

Commissioner Poor: You mean, Mr. Schneider, that it is necessary to make these studies as to the advisability or not

of abandoning certain portions of the plant wherein you contemplate putting in improvements or enlarging the plant in other places?

The Witness: That is true. For instance, we may have a large exchange, and about ten miles away we may have a small exchange. It may be economically advisable to take the subscribers from that small exchange and feed them out of this large exchange. But before we would do [fol. 1698] that that——

Commissioner Poor: I think in that illustration it would be clearly operating.

The Witness: We would first require an engineering study. It would be a design of plant primarily. The final answer would be in the operating expense of the two exchanges; but it would be an engineering study to determine whether one or the other would be economical.

Commissioner Poor: That might be; it may be an engineering study but whether it would be an engineering study that is properly chargeable to capital account, any more than where you have a large and small exchange to study whether it is advisable to abandon the small exchange and put it all in the big exchange; that is a good deal like a study of shifting your apparatus in a building from one position to another, and——

The Witness: Well, I would like to compare it with the cable design. An engineer may design cable to go down a street and he may also draw another plan to have that same cable go down an alley. Now he would set up the two types of plant; he would also set up the cost of each, and after he had balanced the two, the one which proved the most economical would be the one he would adopt; and still that would be an engineering function, and the result of that engineering function would be a lessening in all probability of the operating costs, the carrying charges.

Commissioner Poor: I don't think there is any dispute but what it would be an engineering function, but the ques- [fol. 1699] tion is whether it would be an engineering function that was necessary in originally building the plant.

Mr. McConnaughey: It might also be an engineering study for the purpose of correcting an initial fault in construction, which certainly should not be charged into capital account.

The Witness: As far as that question is concerned I

think that the Company is entitled to any reasonable deviation from 100 per cent correct engineering, because there is no such thing. Engineers make mistakes the same as anybody else and I do not believe the Company should be penalized for engineering difficulties which are unforeseen.

Mr. Hagelbarger: With The American Telephone & Telegraph Company back of you, do you ever make any mistakes?

Mr. Dotson: Speaking about penalizing—if that is what it is—where should the penalty be assessed, against the user or against the company, for mistakes of the company?

The Witness: That would all depend on the kind of a mistake.

Mr. Dotson: Well, a mistake is a mistake, and it has its same effect.

The Witness: My answer would be that a reasonable amount of such engineering should be charged up to the plant.

Commissioner Poor: The Commission feels that the last illustration produced by Mr. Schneider is operative and [fol. 1700] the objection is well taken.

Mr. Burr: Note an exception.

The Witness: Studies and programs have been started as to the necessity of opening a number of new offices in Youngstown, Columbus, Cleveland, Toledo and Springfield——

Mr. Dotson: What do you mean by new offices? I am not sure what you mean.

The Witness: New central office buildings.

Mr. McConnaughey: Additional exchanges?

The Witness: The work of the transmission protection engineer for the year 1924 consisted in the checking of 191 specific estimates; consisted in a number of repeater studies for Cleveland, Toledo, Cuyahoga Falls and Bogart.

A study was made for the new Cleveland main office in order to incorporate the latest developments relative to transmission.

Studies were made involving the future use of loaded toll cables.

A study has been started for developing a fundamental transmission plan incident to the toll property.

Mr. McConnaughey: Now these studies for development, which may or may not ever go into a plant, look rather

far fetched to me as proper examples. I understand what you are talking about is a scientific study not directed to any particular development program; is that correct?

The Witness: The studies that are being made now are to be our guide in the future in connection with all our [fol. 1701] toll plant.

Mr. McConnaughey: Well, it is something like the development work that has been testified to as a part of the work of the General Staff, isn't it?

The Witness: It is similar to that, yes, sir.

Mr. McConnaughey: That does not look like a proper item.

Commissioner Poor: Your objection is that it might not prove advisable after they make the study?

Mr. McConnaughey: Yes; it is just a general scientific investigation, as I get it.

Commissioner Poor: That does not strike me as being so objectionable. It is a good deal like in building a building, you would make two or three or more tests down in the ground to find the proper foundation, and the expense of one that did not locate the proper place to put the foundation——

Mr. McConnaughey: But you are directing that investigation to a specified improvement you are going to make. What we get from this particular testimony is that it is a general study that may or may not have to be used and is not directed to any particular development program.

The Witness: This plan will serve as the engineering basis for future whole plant construction.

Mr. McConnaughey: For anything that may come up that you may happen to find it useful in connection with?

Mr. Burr: No. It is for the expansion that we know will come.

[fol. 1702] Commissioner Poor: I don't see that this is so objectionable.

Mr. Dotson: Even on that basis, though it will come, it has not come, and there is no possible use of it at the present time. We are getting at the present-day development.

Commissioner Poor: But the public demands and needs are what it must make these studies to meet, so as to be in position to take care of that when the day does come. They would be severely criticised if they waited until the day of evil before they prepared for it.

Mr. Dotson: But should not it be incorporated as a capital account when the work is accomplished? You don't add to your capital account until something is performed that furnishes a basis for that capital account and investment. Now much of this is probably bushwhacking; we don't know. They are in that stage probably today; they haven't arrived anywhere; they haven't come out of the woods yet with the game. We don't know what they have that they can capitalize.

Mr. Burr: This sort of work must go on all the time if the plant is to keep abreast of the times. It is not possible to engineer the property in such a way as to serve only the present needs and to serve the requirements of telephone users from day to day.

The plant today if it is properly conducted necessarily involves a large amount of engineering for future requirements. It is as Your Honor, Mr. Poor, has suggested, the [fol. 1703] Company would be very much to blame if it did not so plan. That is particularily true in a business like that of the telephone company which is expanding all the time, and to such an extent that the company itself can scarcely keep pace with the growth. In fact, in many localities it has been unable to.

Now the only way that future growth can be taken care of adequately is to plan for it today. And there is right today in this plant a large amount of engineering which applies necessarily to the future development, but it is none the less a proper cost and none the less a part of the property as it is today, and would be none the less a part of any properly engineered property built to take the place of the property as it is today.

Mr. Dotson: Now I agree with you, Mr. Burr, but how in the world will we arrive at the value of this service except by considering it in connection with the results obtained? Now when this new plant is furnished, is put into operation, then you add to the capital account the cost of that part of the plant plus the necessary engineering—the value of that necessary engineering that entered into it.

Now how can we determine the value of that engineering work that enters into this new plant construction and expansion and betterments until that expansion takes place and those betterments are made?

You do the same thing with an entirely new plant; you build your plant; you make your valuation; and one of the

[fol. 1704] items of value is the value of the engineering service necessary to produce the plant.

Now of course the Commission would never undertake to put into capital account the cost of all that service because much of the service probably was useless and fell by the wayside. You take into consideration the value of the service that entered into the plant produced, and that may be much less than the cost of the engineering work that was expended on that plant because much of it was expended uselessly and did not enter into the production of the plant. Now that is the same problem we are facing in this line of testimony.

Mr. Burr: Why, you might as well say that a farmer who has a field of growing grain has no right to count that growing grain as a part of the value of his farm until after the grain has been harvested and we know what is going to be the result of the harvest.

Mr. Dotson: No, sir. That illustrates my position exactly; that would take into consideration the value of a thing that is in existence.

Mr. Burr: And that engineering is in existence. The engineering has taken place.

Mr. Dotson: No. The product of the farmer's labor is that wheat growing in the field.

Mr. Burr: Exactly; and so also we have the product of our engineering in that it is evidenced by these plans. That is what engineering means. Engineering is not necessarily the building of an extension to a plant. It is just as [fol. 1705] much property when it is represented by the planning and the plans themselves and the work which has been done as the basis for the engineering which is to take place in the future.

Mr. Dotson: Here is the force of your illustration. The farmer——

Commissioner Poor: These remarks are not addressed to the Commission. We have not reached the question of the value. It is just a question of whether this element of engineering enters into it, and the Commission does not fell that it is objectionable at this time.

You may proceed.

Mr. McConnaughey: We note an exception.

The Witness: During the year 1924 the toll plant engineering department reviewed and checked 238 job orders

and 49 estimates. They handed a considerable volume of engineering toll work jointly with the Long Lines Department of the American Company.

A considerable amount of time was spent by the engineering employes of this department in the field relative to the determination of methods for improving the toll plant, and a study was made to determine the most economical amount of poles to place——

Mr. McConnaughey: What was this Long Lines Department of The American Telephone & Telegraph Company? What do you mean by that? Is that on the Ohio State toll lines or on The American Telephone & Telegraph Company's toll lines?

[fol. 1706] The Witness: On The American Telephone & Telegraph Company's toll lines.

Mr. McConnaughey: That is not proper in this case.

The Witness: Well, we do joint engineering work with them. We own property jointly with them and we engineer property jointly with them.

Mr. McConnaughey: Well, that was the question I asked you, whether this was on the Long Lines of The A. T. & T. Company. Now it is the Long Lines of the A. T. & T. Company that you used in this study?

The Witness: That is correct.

Mr. McConnaughey: And those Long Lines—your part ownership is represented in this inventory?

The Witness: Yes, sir, that is correct.

Mr. McConnaughey: I suppose that is all right.

The Witness: Transposition schemes were engineered for 935 miles of pole line involving 6500 miles of physical and 2900 miles of phantom circuits.

The toll traffic engineering department engineered or participated in the engineering of 29 alterations of existing central office equipment; participated in the additions to central office equipment for 169 jobs and participated in the engineering of 25 new offices.

Mr. Dotson: How do you use the word "participated", Mr. Schneider? Is there any particular significance to be given to that particular term?

The Witness: Yes.

[fol. 1707] Mr. Dotson: In what way?

The Witness: The traffic engineering is only one phase of the entire engineering involved in any particular project.

Mr. Dotson: You are only seeking then to capitalize the work of the traffic engineering and not the other engineering that may be necessary that you just spoke of?

The Witness: Well, I am not seeking to capitalize any at the present time. I am just trying to summarize the amount of engineering work that is done by each department.

Mr. Dotson: Well, you are mentioning this specifically, knowing that that is the purpose of the testimony, is finally to put it into the capital account?

The Witness: I am mentioning this because at the time we evaluate the property I will make a statement as to what I believe is the proper amount of engineering to be included.

Mr. Dotson: I understand.

The Witness: And the amount that I am going to include will be based on the Company's present operations and charges. It will be based on what I believe is the proper amount to be evaluated for engineering. And I am endeavoring here to show that such engineering does exist and would exist——

Mr. Dotson: Do you intend to tell us now at this time to what extent they participated?

The Witness: In dollars and cents?

[fol. 1708] Mr. Dotson: No; in the kind of work that they did?

The Witness: That is what I am doing now.

Mr. Dotson: Well, when you say they "participated", is that what you mean as telling to us what kind of work they did?

The Witness: When I say participate I mean co-engineer.

Mr. Dotson: Well, now, my question is, do you intend to state in your testimony what they did in co-engineering?

The Witness: Yes, sir.

Mr. Dotson: All right.

The Witness: During the year 2148 peg counts were made; 62 P. B. X. orders were checked; 15 P. B. X. orders were written; 36 special traffic engineering studies were made for the engineering department, and 61 traffic engineering studies were made for the traffic department.

Mr. Dotson: How do you designate the various studies that they make, according to the number, numerically arranged, as you have mentioned?

The Witness: Well, such studies would be—to take a

typical example—would be one year's work to date on the toll fundamental plan. This plan will probably take four years to complete.

[fol. 1709] Mr. Dotson: Who is doing that work?

The Witness: That is being done by the traffic engineering department.

Mr. Dotson: Where?

The Witness: In Cleveland.

Mr. Dotson: How many men are engaged on that?

The Witness: I don't know offhand how many men are engaged in that particular work, but there are 32 employees in the engineering department.

Mr. Dotson: They are not doing that work all the time; they do any other kind of work that comes along?

The Witness: As I understand it there are several employees that are constantly employed in this one particular study.

Mr. Dotson: That is not in your department?

The Witness: No, sir.

Mr. Dotson: Upon what are you basing your testimony then?

The Witness: On information which was prepared for me in connection with this particular case.

Mr. Dotson: You are reading that information that was handed to you, are you?

The Witness: I am taking it off of summary sheets, yes sir.

Mr. Dotson: Not prepared by you but by somebody else?

The Witness: Prepared for me under my supervision by other people.

[fol. 1710] Mr. Dotson: In what way did you supervise it?

The Witness: I discussed the subject, explained what I wanted, talked with the people and asked them to put it up in a certain form.

Mr. Dotson: But that is as far as you had anything to do with it, just indicated to them by word of mouth what you wanted?

The Witness: I know that these particular jobs are being performed at the present time.

Mr. Dotson: Well, in what way do you know that?

The Witness: By the information that comes to our office.

Mr. Dotson: Through the same source that you got this——

The Witness: Through my contact with the business, yes, sir, and——

Mr. Dotson: Well, your contact with the business——

Mr. Burr: Now I object to the interruption.

The Witness: I see these estimates; I see these job orders; I am in close contact with the entire engineering organization at Cleveland.

Mr. Dotson: Your contact with them is just of the character you mention, that they communicate to you what they are doing?

The Witness: And I see what they are doing.

Mr. Burr: You are part of the engineering organization, aren't you?

[fol. 1711] Mr. Dotson: Well,——

The Witness: I am a member of the chief engineer's organization.

Mr. Dotson: But this work is not prepared under your direction; that is, the work of the engineering department that prepared this information is not under your direction and supervision?

The Witness: It was, in connection with this particular data, yes.

Mr. Dotson: Well, that is, they simply complied with a request you made?

The Witness: That is correct.

By Mr. Burr:

Q. Proceed.

A. I think that in a general way summarizes what The Ohio Bell Telephone Company's engineering people have been doing and it is the type of engineering which would have to be done if The Ohio Bell Telephone Company were to reproduce its property as it exists today.

Another authority or another measure of engineering might be cited as those of outside engineers. During the course of my work I have deemed it my duty to investigate the engineering profession and the charges which they make incident to their work.

Without quoting any charges, I found that in the East, in the Middle States and in the West various engineering societies have from time to time issued what they call a Code

of Ethics. This Code of Ethics among other things quotes [fol. 1712] what the members believe to be reasonable charges for engineering services. In practically all cases the method of arriving ar charges is——

Mr. Hagelbarger: I object to the testimony on the ground that this relates now to the value or the rates of engineering rather than to the work of engineering.

Mr. Burr: He said he did not intend to state the cost.

Mr. Hagelbarger: But this may qualify him later on.

Commissioner Maullar: That can be brought out when it comes to the valuation.

Mr. Burr: He is not attempting to evaluate the services now.

Mr. Dotson: But he is giving the method by which it is going to be done, and that should be presented when the question of value comes up.

Commissioner Maullar: The objection will be sustained.

Mr. Burr: Note an exception.

Commissioner Maullar: That can all be brought out when the values are presented.

The Witness: Well, may I state my judgment as to the proper method of allowing engineering?

Mr. Hagelbarger: I object to the witness dictating as to what he shall state himself. We have an attorney who is examining him. If he wants anything from him I suppose he will ask for it.

[fol. 1713] Mr. Burr: The witness did not attempt to dictate what he was going to say. He simply asked a question.

Mr. Hagelbarger: His function is to answer questions and not to ask them.

By Mr. Burr:

Q. What is your judgment as to the proper method of allowing engineering, without giving any estimate in per cent or money?

Mr. Hagelbarger: I object.

Mr. Burr: He is an expert witness and he can certainly testify to that.

Mr. Hagelbarger: It is premature.

Commissioner Maullar: Is engineering a part of this program—I don't see that that is objectionable.

Mr. Dotson: I think it goes further than that, may it

please Your Honor. If you will just read that question again, you will get the significance of it I think.

(Question read.)

Commissioner Maullar: That is his opinion of the method.

Mr. Dotson: Well, that is the thing we want when it comes to evaluating. Then we will know how he is proceeding to value.

Commissioner Maullar: He is an expert. He can give an opinion. That is about all it amounts to, isn't it?

Mr. Dotson: I know, but there is a proper time for that and we claim that now is not the time, when we are only dealing at the present time with the subject that will constitute a basis of value. This is the method of value, and [fol. 1714] that is a thing we will deal with when it comes to determining value and not now.

Mr. Hagelbarger: Isn't this the situation before us now; this testimony now is to the quality and quantity and necessity for engineering service. I think that is a fair statement of what he is permitted now—or should be permitted to testify to.

The question now asked the witness relates to the method of applying a cost or charge or value to such services and that certainly will be a subject of proper inquiry at the time when the Commission is receiving the testimony as to that charge or value or cost of engineering service, and not at this time.

Mr. Burr: I had not thought that the question was going to cause quite so much excitement.

Commissioner Maullar: I think at this time the objection should be sustained, because later Mr. Schneider—he has now told us of the activities of the engineering department, summarized them in detail, and to go further at this time it looks to me like we are getting into the cost.

Mr. Burr: Note an exception.

By Mr. Burr:

Q. Mr. Schneider, upon what basis should engineering be included in the present inventory, in your judgment?

Mr. McConnaughey: The same objection. It is the same kind of a question.

Mr. Burr: Oh, no, it is not.

[fol. 1715] Mr. Dotson: You are trying to get it in for the purpose of evaluating. You have the statement of the witness as to what the traffic engineering department has done.

Mr. Burr: There is no question, I take it, but that engineering is a proper item for this inventory?

Commissioner Maullar: That is conceded I think by all. It is a question now if he is going to——

Mr. Burr: Now, if Your Honor please, I am asking him, not to evaluate the engineering, but as to the basis upon which the engineering should be included.

Mr. Dotson: That is exactly what is included in the other question—the method.

Mr. Burr: Just a moment; not the amount of it, but——

Commissioner Maullar: I think we will let that go in for what it is worth at this time, and we will see where he goes with it.

Mr. Dotson: Pardon me for this additional remark; suppose Mr. Schneider is never produced to put a value on this matter that he is testifying to; suppose he is never produced as a witness for that purpose; that is possible; now why should this go in?

Commissioner Maullar: We will see what this answer is, and then we will decide whether it is to stay in or not.

The Witness: In my judgment the proper basis for including engineering is the application of a percentage to an amount.

Mr. McConnaughey: I hove to strike it out.

[fol. 1716] Mr. Burr: The answer is perfectly proper.

Commissioner Maullar: I think it may stay in. It does not mean a thing.

Mr. Hagelbarger: May we have it excluded from the record since it is so meaningless, and since it was not an answer to the question at all? I thought the question was proper, and I disagreed with my associates on the reason for including the engineering item. I think it is proper, because otherwise it should be excluded from this exhibit. I thought the question was proper, but the answer evidently is not responsive.

Commissioner Maullar: As an expert opinion he merely says it ought to be on a percentage. Now I cannot see that that is material.

Mr. Hagelbarger: It is not responsive to the question.

Mr. Burr: It is precisely. I asked him upon what basis it should be included.

Mr. Hagelbarger: You did not ask him what basis the cost of engineering should be included. If the word cost had been contained in his question the answer would be responsive, but the word cost was not in, and therefore it was a proper question, and therefore his answer should be pertinent, and it is a pertinent inquiry here.

Mr. Burr: I am unable to split that hair with you.

Mr. Hagelbarger: There is no hair there.

Mr. McConnaughey: The proper basis is the cost. His [fol. 1717] answer is the method of determining cost for the purpose of this inquiry.

Commissioner Maullar: It does not sound hardly responsive to the question, but let it stay in.

Mr. Hagelbarger: Note an exception.

By Mr. Burr:

Q. You may next take up the item of interest during construction.

Mr. Dotson: Is that an engineering feat?

The Witness: The element of property or cost incurred by reason of interest during construction is unavoidable and one that cannot be escaped. Interest during construction is present no matter what method of financing may be adopted in the construction of the property.

Money for construction is obtained from time to time during the process of construction and is forthcoming until such time as the plant shall have been completed and become active as an operating system. During this time of construction the element of interest is operating continually. No one will provide funds for financing unless the funds so provided return an income.

Interest may be compared with depreciation in this respect; both are ever present in a telephone property. Interest must be computed whether the funds are secured from common stock or preferred stock or bonds, debentures, notes or any other form of financing.

Interest is an economic fact, and even though an investor may choose to donate the use of his money, nevertheless the item of interest is present.

[fol. 1718] Should the corporation, in lieu of building the property itself, choose to retain a contractor, and should

the contractor's bid for the work be accepted, and no mention made of interest in the contract, the item of interest nevertheless would have to be taken into consideration——

Q. You were discussing, Mr. Schneider, the item of interest during construction. Will you please proceed to show how that item inheres in the property under consideration and how it would be present in a reproduction of the property?

A. For the omission by the contractor of such an item would be disastrous for him. The element of interest during construction is dependent upon the current rate of interest during the span of time between the time of securing the cash and the time at which plant erected by such money is ready for service; this calculation of interest would be a minimum when the borrowing date and the installation date coincided.

In the building of a property such as ours it would be inevitable that the interest cost would be greater than the minimum which I have just stated for the reason that money would be provided in advance of the installation.

Sound financing and good business would require that a sufficient amount of funds would be forthcoming to assure the completion of the property. Land would have to be secured; franchises would have to be obtained; an organization would have to be effected; bonds, stocks, notes or debentures would have to be marketed, and a considerable amount of other miscellaneous expenses would have to be [fol. 1719] met at the inception of the project.

A common practice for the determination of interest during construction is that of figuring interest for the entire amount of money for half of the construction period. This is equivalent to an assumption that the expenditures involved in construction would follow a uniform trend from the start of construction until completion.

It also involves the consideration of obtaining money as necessary without any delay. Such a computation or assumption produces a very broad answer and in my judgment is not entirely proper for consideration in the construction of a property such as The Ohio Bell Telephone Company.

Q. Why not, and what would be the proper method?

Mr. Dotson: Now just a moment. We object to this. It seems to me we ought to be dealing with the method that

actually is employed and not what he thinks is the proper method. We are not interested in Mr. Schneider's idea of what the method ought to be if they are not following the method.

Mr. Burr: What has that to do with the reproduction of a property, Mr. Dotson?

Mr. Dotson: Well, it seems to me it has everything to do with the value of the property you are producing and presenting to the Commission for a rate. Now surely they are not going to add any greater amount to the capital value out of the interest charge than that which was charged. Now that will have to be determined by what actually took place, not what Mr. Schneider thinks should [fol. 1720] have been done or what ought to be done in the future.

Commissioner Maullar: You will never get the actual charge in the reproduction of a plant as it stands. Wouldn't it have to be the proper charge for a reproduction?

Mr. Dotson: That is true, but then there is a method and they have adopted a method of computing this. This is not a matter that they are going to do hereafter some time for the purpose of this hearing. I assume that their books do show on their capital account what has been charged as interest, and now they have adopted a method by which they have done it.

Now, according to Mr. Schneider's statement that he is starting to make, he has a method different from what they have followed.

Mr. Burr: Not at all.

Mr. Dotson: And if that is the case it is wholly irrelevant, and it cannot possibly have any bearing on this case.

Commissioner Maullar: I understand Mr. Schneider is an expert engineer and he has a right to express an engineering opinion. Now it can be readily brought out on cross-examination by you people whether the method he gives is the method employed. So I think the question may be answered.

Mr. Dotson: He has just stated, Your Honor, that in determining interest here he figures interest for the entire amount of money for half the time that is taken in the construction work. Now if he has a different method, why, that is not material here; because if they had pursued [fol. 1721] the other course——.

Commissioner Maullar: All right; if that is brought out, that they pursued the other course in the construction of the property, well and good. But he is entitled to give an engineering opinion as to the proper procedure I think. That will be the ruling.

Mr. Dotson: Note an exception.

The Witness: I do not want the record to show that the method Mr. Dotson is talking about of taking the entire amount of money for half the construction period is the correct method of determining interest. I mentioned that as being one of the broad methods used although it is not used by The Ohio Bell Telephone Company.

Mr. Dotson: Well, then let us have the method used by The Ohio Bell Telephone Company and not what you think is the best way. This Company has been in existence long enough to have adopted some method.

Mr. Burr: It does not make any difference what method the Company may have adopted. The question is what it would cost to reproduce this property. If the Company had been given gratis all of the interest during construction or if it had had to pay nothing by way of interest during construction, nevertheless on a reproduction of this property the Company would be entitled to compute as a part of the cost of the property interest during construction. The ideas of the gentlemen on the other side, it would seem to me, have reference to the question of original cost, and that is not what we are dealing with here. We are un- [fol. 1722] dertaking to produce this property and it does not make any difference what the practice of the Company is, although we are perfectly willing to show it. That would not establish the proper amount or proper basis for computing interest during construction in this case; that is to say, it would not necessarily do that.

Suppose, for example, that our method had been the wrong one and that we had computed entirely too much for that amount; that would not be a fair basis for the computation on a reproduction basis of the item of interest during construction.

Mr. Dotson: I agree with you on that, Mr. Burr, but we have not reached that point and in this hearing we are not expected to reach it.

Now there is another thought that attaches to this question, and that is the one brought out in the objection that

we wrangled over awhile ago. He is now dealing with the method of computing interest. Now how far are we going to go at this time in determining the method of computing interest when that touches immediately on the threshhold of value?

Commissioner Maullar: That is just an engineering opinion given by an expert.

Mr. Dotson: All right. This witness may never be produced again and his testimony would be perfectly meaningless as far as this record is concerned. It only becomes important when he goes on the witness stand or any other person goes on the witness stand to tell what the value of [fol. 1723] this item is.

Commissioner Maullar: By that same reasoning, Mr. Dotson, there may be another engineer representing the City go on and say his opinion is all wrong and he may have another opinion. But he is an expert, qualified as such, as an engineer, and is entitled to give an opinion on the subject.

Proceed and answer the question.

Mr. Dotson: Note an exception.

The Witness: Knowing from the inventory which Mr. Williams has filed the amount of property in the State and from our records we know the distribution of such property by areas, it is possible to lay out a construction program. Such a program will assume that financing or the securing of funds is assured.

We know how telephone properties are built and developed. We know the fundamental and basic items of plant without which the property could never be built. We know what items are of an individual nature and those that are of a community character. We know, considering plant only, that the securement of a site for a building is the first move.

The leasing or building of a structure to house the central office equipment is second.

The ordering, manufacture and installation of the central office equipment is third.

With these three items definitely known the remaining plant and equipment can be installed and engineered so as [fol. 1724] to meet a definite time at which the entire structure will be ready for service. This, in my opinion, is fundamental in the determination of the item of interest.

The construction program, prepared and engineered as outlined, having in mind at all times a reasonable date for commencement of operations, will produce one factor essential for the determination of interest, and that is the time factor.

The construction program can be and should be broad enough to show the money requirements for some specific period of time, say quarter year periods. This will enable one to strike an average amount required for the various periods and will produce the second factor, or the amount.

The rate of interest will be that one that is reasonable and proper.

From my personal experience and from my review of the operations of The Ohio Bell Telephone Company, I know that money must be and is paid for interest. Our Company pays large sums annually and it also pays dividends, which in the final analysis are payments for the use of money.

Mr. Dotson: Do you mean now to include dividends as a part of the interest amount in your basis of determining interest?

The Witness: I mean to imply that interest, as commonly recognized, does not cover all the wages which are demanded by money. Dividends are in the same category as interest so far as wages of money are concerned.

Mr. Dotson: Dividends on common stock?

[fol. 1725] The Witness: Dividends on common and preferred stock.

Mr. Burr: Especially if the stocks have been authorized by the Commission.

The Witness: Is that directed to me?

Mr. Burr: No, I just interjected that. Proceed.

Mr. Dotson: I move that the remark of counsel may go out.

Mr. Burr: It may go out. I was just thinking out loud.

Mr. McConnaughey: It should be stricken out unless you put in all of your thoughts.

The Witness: I think that concludes my discussion of the question of interest during construction.

Mr. Burr: Your Honor, shall we take up at this time the discussion of the items of taxes during construction or postpone it until after lunch?

Commissioner Maullar: Yes, I think we better recess at this time until 1:30.

And thereupon a recess was taken until 1:30 o'clock P. M. of same day.

[fol. 1726] Afternoon Session

Wednesday, January 21st, 1925.

And also W. G. SCHNEIDER, resuming the stand for further examination in chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr.

Q. Will you next take up and discuss briefly, if you please, the item of taxes during construction?

A. The taxes during construction, the same as interest during construction, is unavoidable in the State of Ohio insofar as telephone property is concerned.

Mr. McConnaughey: Why do you discriminate against Ohio in that way?

Mr. Dotson: And in favor of telephone companies?

The Witness: In this State all telephone property, whether in the process of construction or operating, is taxed.

The taxes levied and the taxes paid apply to the structure in its entirety other than the real property tax, the real property tax being paid for the property in the districts located and on the value of such property. For this reason, and also due to the complexity in computing taxes, the Company has never made any allocation of the taxes which [fol. 1727] it has paid as between taxes on operating property and taxes on property in the process of construction.

The taxing situation in Ohio being as it is, the item of taxes during construction must be considered as part of the property owned by the Company and property used and useful for rendering telephone service.

There are three factors considered in connection with taxes during construction, namely, the tax rate, the construction period and the amount of construction on any tax listing day.

In the determination of interest during construction which I have discussed heretofore a skeleton or brief outline of a construction program was discussed. This outline of construction will apply insofar as taxes during construc-

tion are concerned. This will give one factor, namely, the construction period.

The tax rate, there being multitudes in the State of Ohio, can be computed as a composite based on the taxes now being paid by this Company on its property. This is a matter of record.

Mr. Dotson: You mean to say, Mr. Schneider, that in your computation of taxes upon property in the course of construction that you used a composite rate made up of the various rates applicable in all localities in which you have operating plants?

The Witness: Yes. I believe the simple solution to the question of the tax rate would be to take the total amount of taxes paid by the Telephone Company on its property, [fol. 1728] and, knowing the value of that property, arrive at a composite taxing rate.

Mr. Dotson: Do you adopt the same plan with reference to the taxes on operating properties?

The Witness: We do not differentiate between operating properties and properties under construction so far as taxes are concerned. The rate would be the same.

Mr. Dotson: Then the taxes that you pay in Lucas County, where Toledo is located, sofar as your records are concerned, are identically the same as far as the rate is concerned as you pay in Franklin County, where Columbus is?

The Witness: No. On the real estate we pay the rates that prevail in Lucas County, but on the other property we pay a tax that is computed by the Tax Commission, as I understand it. They compute the amount of taxes which we must pay, and on the basis of some unit, wiremileage or pole mileage, that tax is allocated to the various taxing districts in the State of Ohio.

Mr. McConnaughey: They allocate your total valuation, don't they, to the different counties?

The Witness: Well, that is the same thing.

Mr. McConnaughey: Except they don't "monkey" with the rate, but they take the total property and allocate it according to the——

The Witness: That is right.

Mr. McConnaughey: That is true of all other utilities, and [fol. 1729] I think it must be of telephone companies as well.

Mr. Dotson: I suppose so.

The Witness: Am I correct in that statement?

By Mr. Burr:

Q. Is it your understanding that the State Tax Commission computes the total tax on the personal property and then the total amount of taxes so assessed are allocated to the different counties on some such basis as you mention, or that the Tax Commission fixes a value on all of the property and that value is in turn allocated to the different taxing districts on some such basis?

A. Well, my understanding is that our people prepare measurements required by the Tax Commission, which are submitted to the Tax Commission. The Tax Commission then takes the measurements thus furnished and apply costs to arrive at the value of the property. I then understand that the Tax Commission allocate this property as between the taxing areas throughout the State of Ohio. Now whether they also compute the tax I do not know.

Q. Well, of course the law itself will settle that question. You may proceed.

A. It is my judgment that taxes during construction applicable to the reproduction of the property under consideration is an item of property, and to omit consideration of the same in an inventory would be a grave omission.

I think that in general covers the question of taxes during construction.

Mr. Dotson: Just a moment; do you mean by what you have said that you would include in the capital account taxes [fol. 1730] that are computed by the Company upon work in course of construction instead of taking into account the taxes actually paid to the various taxing districts?

The Witness: Well, I believe, as I stated, that I would take the actual tax paid and apply that to the construction program which would be set up for the reproduction of this property, and the only property that I would take taxes during construction on would be that property which was not in service or being used.

Mr. Dotson: Well, your method then, you mean us to understand, is one that will only include taxes actually paid by the Company on property that was assessed or levied for taxes?

Mr. Burr: He did not say that.

Mr. Dotson: Well, that is what I am trying to get at.

The Witness: The only use I would make of the actual

taxes paid would be to arrive at a composite tax rate. This composite tax rate I would apply to the moneys involved in the construction program. The amounts actually paid would not enter into any calculations that I might make other than the determination of a composite rate.

Mr. Dotson: Well, in computing in your capital account cash investment you would not include more than the cash actually invested, would you?

The Witness: As a bookkeeping proposition, no.

Mr. Dotson: Well, as any other proposition, how would you?

[fol. 1731] The Witness: In the reproduction of this property there may be no relation whatsoever as to the amount on the books for taxes during construction and an amount that really inheres in the property.

By Mr. Burr:

Q. Consider next, if you please, the item of general expense, to which you referred in your previous testimony.

A. The general expense item may be divided into two distinct classifications; that is, the generally accepted general expenses and the organization expenses.

Under the general expenses we have such expenses over and above what are generally known as the organization expenses.

After a property has gone through its stage of preliminary organization, an organization of general officers whose duty it is to supervise the entire personnel of the Company is put into motion. The expenses incurred by these general officers are just as much a part of the property as are any of the expenditures made and testified to heretofore.

After the project has been through the preliminary stage of organization it may evolve on the same group, or an entirely different group, of people to assume the responsibility of construction.

There must be an organization to guide the project; to consult with the engineers; to transact all the necessary business encountered in the building; to build up an operating organization; to secure business, and otherwise take [fol. 1732] care of the corporation's affairs. In such expense you will find the salaries of the general officers, the salaries of their staff, legal advice and legal services, rents, heat, light, and miscellaneous expenditures incident to of-

fice maintenance. These are a part of the cost of constructing the property. Such expenses during the construction of the property and prior to the recommendation of service must consequently be somewhat larger than after operations start; first, because such general officers usually are of sufficient capacity to perform both duties; that is, supervise construction and supervise operation, without a material increase in their personnel.

I believe therefore in general it will be found that the amount of expenses of this character in a going concern will be somewhat lower than would be the case if the property were to be reproduced now.

The item of insurance, both liability and fire, during construction are wholly chargeable to construction; whereas, after operations have started, these items become in part or wholly operating expenses.

The same may be said of a large number of other expenditures. The usual method of ascertaining the amount of such expenses for inventory and appraisal purposes is to apply a percentage to a certain base.

The organization is an item which probably should be considered under the general classification of general expense. At the time of the creation of this Company considerable organization work was done. This work was in [fol. 1733] no way related with construction, but was entirely of a different character. This work and expense was incident to the formation of the incorporation and includes such items as fees paid to Governments for the privilege of incorporation, and all office expenses incident thereto. It includes legal fees, the cost of documentary stamps, the cost of recording mortgages, the cost of recording agreements, the cost of printing, the cost of stock listing, and many other items.

The costs for services rendered by The American Telephone & Telegraph Company in connection with the organization are not considered as organization expenses in the light of the testimony I have just given. They are valuable, but have, in my estimation, no place in an inventory at this time.

Q. That is, at this place?

A. That is, at this place.

Mr. McConnaughey: You do not claim that they are a capital charge at any place, do you?

Mr. Burr: We will let that develop as the case proceeds.

Mr. McConnaughey: All right.

Mr. Dotson: It is proceeding now, isn't it?

The Witness: That in general covers the pertinent points as I see them in connection with general expense, and are expenses which would be involved in the reproduction of a property such as The Ohio Bell Telephone Company has at the present time.

Q. Will you please consider next the item of working [fol. 1734] capital and discuss it briefly in connection with the inventory?

A. The necessity of a corporation having ample working capital or current capital for the facilitation of its business is apparent. The amount to be considered in the inventory is a considerable factor, and in this particular case there is a question whether the inventory should contain amounts.

The Telephone Company has large supplies of material ready for emergencies and available for the current needs of the business.

There are 500,000 telephones being served for which a sufficient amount of stock or parts to render continuous service must be quickly available.

Payrolls must be met; cash must be advanced to the employees; bank balances must be maintained throughout the State of Ohio, and a reasonable cash in hand amount must prevail for the ordinary business contingencies.

The mechanism or the nature of the telephone business is such that bills for service must be rendered after the service has been given. There is a lapse of about 17 days between the date of collecting for service and the date of billing for service. There is a lapse of about five days between the date of rendering service and the date of billing for that service. So that there is an average period of about 22 days where the subscriber may be said to be in arrears in the payment of his bill.

During the time of giving this service the Company is expending money in wages, rent, heat, light, and items of [fol. 1735] a similar character.

There is no rule or formula by which working capital may be determined. The amount must be such as to permit the Company to transact its business in an orderly and unhampered manner. It must be of a sufficient amount to per-

mit the Company to give economical, satisfactory and uninterrupted service. It must be of sufficient size that the Company may take advantage of the discounting of bills due others. It must give the Company an opportunity to purchase supplies and material beyond the hand-to-mouth stage, and it should be of sufficient size to meet a reasonable amount of contingent and emergency needs.

The usual method of determining working capital is on the basis of a percentage applied to an amount.

In the reproduction of this property it is my judgment that working capital to the extent outlined in my testimony must be considered as a part of the value of such property.

Q. What other item, if any, is there inhering in the property of The Ohio Bell Telephone Company, and which would be present there in the event of its reproduction, other than those to which you have already referred?

A. There is the element or property value known as going value which inheres in any property which is a going concern.

Mr. McConnaughey: Well, we object to any testimony on this subject excepting testimony as to actual expenditures for this purpose.

Mr. Burr: At the present his testimony is limited to [fol. 1736] a description or inventorying of the item, and it is not our purpose today to attempt to evaluate the item.

Mr. McConnaughey: According to the rulings of the Supreme Court there is no such thing in the property except as measured by the expenditures. That being the case, there isn't any testimony possible except for that, is there?

Mr. Burr: I don't agree with that interpretation of the decision of the Supreme Court. If I correctly remember that case the Supreme Court recognizes the element of going value but in the particular case under consideration held that it must be proven by what the Court was pleased to term "direct evidence".

Mr. McConnaughey: Of expenditures.

Mr. Burr: Of expenditures; and that is as far as the decision went. Of course here we will not attempt to show any evidence either of expenditures made or of expenditures which would be necessary to be made; Mr. Schneider's testimony being limited, as I understand it will be, to a mere description of the item; and even as to that, I think he expects to touch it very briefly at this hearing with the

idea that at a subsequent hearing, when the item is evaluated, it will also be more specifically described.

Commissioner Poor: I think they have a right to attempt to show that there is such a set-up in the property and should be included in their inventory. As to whether it will be allowed and as to the amount of it, that is another question. We will reach that when we get to it. But they are [fol. 1737] just attempting to prove now that there is such an item in the inventory, and I think they should be given the opportunity to do that.

Mr. McConnaughey: Note our exception.

The Witness: Going concern is property, and is created by the attainment and possession of some or all of the various elements and advantages which inhere in a property which has become an operating unit as compared with a property similar in all of its physical attributes but not yet coordinating, correlated and operating and possessed of any attached business.

Mr. Hagelbarger: Possessed of what?

The Witness: Of an attached business. It has cost money to obtain, secure, create and develop many or most of the elements and advantages which do inhere in a property. It would cost money to reproduce them today if they were not already possessed.

On Page 160 of Williams Exhibit 3-b are outlined some of the advantages and elements which enter into the cost of establishing business part of going concern.

Each and every one of the items enumerated from A to K inclusive require the expenditure of money. The absence of any formula for the determination of going value in no way depreciates the fact that there is such a value.

It does not seem to me to be of much consequence that mathematics or the science of mathematics has not been able to develop a formula for these costs.

The same might be said in the determination of value re- [fol. 1738] lative to damage suit cases; there is no formula to be applied; it is a question of fact, which is developed through testimony, and after all the facts have been submitted a value is arrived at. The same may be said relative to going concern.

The items which are enumerated on page 160 of Williams Exhibit 3-b in themselves mean nothing, but when correlated with the remaining portion of Exhibit 3-b and 3-a they

mean considerable. That is to say, the physical items and the going concern item are invaluable to each other.

Without going into the question of computation I think that in a general way covers going concern. In my testimony to follow I will restrict the testimony to one element of going concern, and that is the cost of establishing the business.

Mr. Laylin: If the Commission please, may I interject; I have not been in the hearing on this inventory and at the risk of perhaps repetition of an objection which has heretofore been made when I was not present, it seems to me that Mr. Schneider's statements, which I have heard since I have been in the room, as to going concern value, constitute an attempt to either write a brief for Mr. Burr or an opinion for the Commission, one of the two. In other words, he correctly stated some theory as to going concern value. True, he is an expert, and as such is entitled to testify as to value perhaps. But when it comes to testifying as to what the Commission is going to consider in determining value, he is limited to facts. Now he has not [fol. 1739] been testifying to facts here, and it seems to me on that ground that the answers which he has given, the last two answers, have been wholly outside the scope of competency of testimony of an expert and should be stricken from the record, and I so move.

Commissioner Poor: He has not attempted to testify as to facts. He will have to testify to facts when he comes to valuation. He is now testifying as an expert engineer that theoretically there is such an item as this in the inventory, and it is his opinion theoretically that there should be such an item there. As to whether the Commission finally allows that is for the Commission to determine.

Mr. Laylin: But he went further than that and expatiated on the reasons back of it—the theories, and I do not think even though he is an expert that it is competent for him to write a brief or opinion into the record.

Commissioner Maullar: The Commission has ruled numerous times that it takes direct evidence of expenditures in order to get a going concern value.

Mr. Laylin: Well, I think that is true, and that adds weight to what I have just stated, I believe.

Mr. Burr: We expect to make up our record on the matter of going value, and particularly the item of cost of es-

tablishing the business, as we go along, in order that the question may be tested further if necessary. But in accordance with previous rulings of the Commission on the same subject it is our belief that the testimony should be allowed to stand.

[fol. 1740] Commissioner Poor: I think as an item set up by the Company that the Company is entitled to give testimony on that just as much as on some tangible thing. The Company would have a right to set up items, for instance, of poles. Now it remains to be proven later on whether there are any poles there.

Mr. Laylin: That is true.

Commissioner Poor: And the Company's theory is that there is such an item in the inventory as going value. Now it remains for the Company later on to prove whether that item is in this property or not.

Mr. Laylin: That is true.

Commissioner Poor: At this stage of the game I do not think the testimony is objectionable, and your objection will be overruled and your exception may be noted.

The Witness: I would like to add one more word. The items of property as listed on page 160 are those items which the Company possesses at the present time, and in my judgment in the reproduction of The Ohio Bell Telephone Company's property would necessarily be involved in the determination of the entire property and also in the value thereof.

Mr. Burr: In conclusion, and in order to cover any possible previous omission, we desire to offer in evidence Williams Exhibits 1, 2, 3 (Volumes 1 and 2), and Williams Exhibit 4, and Schneider Exhibit No. 1.

And thereupon the Exhibits last above referred to are [fol. 1741] admitted on evidence on behalf of The Ohio Bell Telephone Company and are herewith submitted and marked respectively Williams Exhibits Nos. 1, 2, 3 and 4, and Schneider Exhibit No. 1.

Mr. Burr: Now will the Commission fix a date for cross-examination?

Commissioner Poor: Do you gentlemen desire to ask any questions of this witness at this time?

Mr. Dotson: No, I think not.

Mr. McConnaughey: Mr. Burr, is that all the testimony you have on the inventory?

Mr. Burr: So far, yes, sir.

Mr. McConnaughey: Well, "so far", but do you expect to value anything more, that is the question?

Mr. Burr: Not unless there shall be some challenge.

Mr. McConnaughey: All right.

Mr. Dotson: It will be supplementary?

Mr. McConnaughey: Well, we can consider this complete as far as your present plans go?

Mr. Burr: Yes, sir.

Mr. McConnaughey: All right.

Commissioner Poor: How much time do you suppose you will want for cross-examination on the inventory?

Mr. Dotson: Well, I suppose we ought to have a couple of days any way.

Assistant Secretary Archer: Tuesday, March 10th, is [fol. 1742] the first open date.

Commissioner Maullar: March 10th and 11th.

Assistant Secretary Archer: As a matter of fact there is not a date that hasn't at least two sets of cases set from now until then.

Commissioner Poor: Practically every day, as it now stands, until then the Commission will have to split.

And thereupon the further hearing of this case was adjourned until Tuesday, March 10th, 1925, at 10:00 o'clock A. M.

[fol. 1743] Morning Session

Tuesday, March 10th, 1925.

And thereupon the further hearing of this cause was resumed pursuant to adjournment, before Honorables Charles C. Marshall, Chairman, Geo. T. Poor and Frank B. Maullar, Public Utilities Commissioners.

Appearances:

Karl E. Burr and Charles S. Maltby, on Behalf of The Ohio Bell Telephone Company.

Frank M. Dotson, on Behalf of the City of Toledo.

W. S. McConnaughey, on Behalf of the City of Dayton.

Karl F. Shuler, on Behalf of the City of Cleveland.

Henry M. Hagelbarger, on Behalf of the City of Akron.

G. W. Wilmer, on Behalf of the City of Middletown.
John H. Cooper, Assistant Prosecuting Attorney, Franklin Co., O.
D. S. Lindsay, on Behalf of the City of Piqua.
L. F. Laylin, Assistant City Solicitor, on Behalf of the City of Columbus.

[fol. 1744] Chairman Marshall: Are you ready to proceed with the hearing, Gentlemen?

The matter set for hearing at this time is the adjourned hearing of Case No. 3307, The Investigation and Inquiry of The Public Utilities Commission of Ohio, upon its own motion, for the determination:

(a) Of the fair value of the property of The Ohio Bell Telephone Company, toll and exchange?

(b) Of the just and reasonable rate; and

(c) Of the reasonable rules and regulations for the service furnished by said Company to its patrons throughout the State of Ohio.

Are you ready?
Mr. Burr: Yes.
Chairman Marshall: You may proceed.
Mr. Burr: We are met this morning, Your Honors, for the cross-examination of Mr. Williams and Mr. Schneider on their inventory testimony.
Chairman Marshall: Which one do you want first, Mr. McConnaughey?
Mr. McConnaughey: Mr. Williams:

[fol. 1745] And also GEORGE B. WILLIAMS, resuming the stand for purposes of cross-examination, having been heretofore duly sworn, testified as follows:

Cross-examined.

By Mr. McConnaughey:

Q. Mr. Williams, these two volumes which have been introduced by you as the inventory of the Company's property were made up and intended to exhibit all of the property that the Company has in the State of Ohio, are they?
A. That is right.

Q. And you explained, as I recall, in your direct examination, that they are made up from the Company's records, supplemented by checks in the field; is that correct?

A. That is right.

Q. And the Company's records that you refer to are what?

A. The records of measurements and the engineering records which are ordinarily kept by the Company.

Q. What use has been made, if any, of inventories that have been made and filed for particular rate cases that have been presented to the Commission heretofore?

A. They were used in every case, not only to go into this inventory, but those inventories were also incorporated into our regular running records of property.

Q. And take the inventory that was introduced in Dayton, for instance; I speak of that because I have some familiarity with it. In that case there is embodied in this [fol. 1746] record then and in these exhibits the total of the various classes of property that appear in the two exhibits representing the Ohio Bell and the Ohio State property in that case?

A. That is true, but modified with the additions and deductions incident to the ordinary changes in the property at Dayton, and incident to the changes due to unification.

Q. But the inventory that was filed in the Dayton case is the basis of the inventory of the Dayton property in this inventory; is that correct?

A. That is right, yes, sir.

Q. So that in this inventory there is included all of the property listed in the two exhibits filed in the Dayton case that is still on the ground and in use to any extent in Dayton?

A. That is right.

Q. And in that connection, where there are two lines of telephone poles along any street or alley or other public way in Dayton, as shown by those two exhibits and the supplemental plats and maps that were filed in that case, those two lines of poles would appear in this exhibit; is that correct?

A. Provided they were still in use and not taken down, yes, sir.

Q. So that if there was any duplication of plant of any kind, outside plant,—let us confine it to that—shown by

the evidence and the exhibits in the Dayton case, and those items of property are still in place, that duplication would appear in this exhibit?

A. Yes, sir, if they were still used and useful, yes, sir.

[fol. 1747] Q. Well, the question of degree of usefulness is a question about which there might be some difference of opinion, isn't it?

A. There might possibly be.

Q. Your own notion about that is that if it is used, it is useful, isn't it?

A. Yes.

Q. And when you say "used and useful" you are really using a superfluous word when you say "useful," according to your way of thinking?

A. Well, of course, also in my mind the word "useful" conveys a definition that it must be something that is useful for telephone purposes.

Q. Certainly; that would be assumed; but if it is used for telephone purposes, according to your notion of that particular feature of a valuation it is useful for telephone purposes; that is correct, isn't it?

A. Why, I don't know that I would go with you 100 per cent on that. I can conceive of a condition where something might be used and it still might be so out of the ordinary that I would not consider it normally or ordinarily useful.

Q. What sort of a situation do you have in mind as an illustration of that?

A. Well, it is rather hard to recall. You might have wires on a fence post, for instance, and it might be used for a purpose, but the fence post is something that is not ordinarily used as a support for wires. Now that is probably rather a far-fetched comparison but I think that illustrates the point that I have in mind, that such a condition could occur.

Q. You do not admit the fact of two facilities for exactly the same purpose; for instance, two pole lines, either one [fol. 1748] of which might bear the entire load along a given run of wire, that there is any duplication or any lack of usefulness in the second pole line?

A. Oh, there may be duplications but to my mind duplication is an entirely different thing from used and useful.

Q. You do not admit there is any lack of usefulness in the second pole line?

A. No, sir.

Q. Of course, you admit there is a duplication in that instance?

A. Oh, yes, there might be.

Q. Well, now, I have spoken of Dayton; the same thing is true with reference to other cities where inventories have been put in, is it not?

A. Yes, sir.

Q. Where there were two companies that were unified, I mean the Ohio State had a property and the Ohio Bell Company had a property and they were unified, whatever duplication of facilities there were in the original inventory is carried into this inventory; isn't that a fact?

A. Well, subject to the changes that took place subsequent to the taking of the field inventory.

Q. That condition would exist where—I mean in any of the cities where you put in or made inventories in connection with unification proceedings that are carried into this inventory?

A. Well, we made inventories that were used in connection with unification cases in quite a number of cities. Now I don't recall all of them, and I don't know now what the condition is as regards the amount of duplication that still exists. There are quite a number of those cities, or were at that time. Of course there is quite a bit of that so-called [fol. 1749] duplication that was eliminated in the process of unification.

Q. I understand. Now name some of the cities and municipalities where that unification process has been carried out and where you have made inventories of the two properties as you made them in the Dayton case for the purpose of filing with the Commission?

A. Oh, I could name part of them. I could not name all of them.

Q. Well, name as many as you can?

A. Toledo, Dayton, Youngstown, Akron, Canton, Massillon, Alliance, Zanesville, Findlay, Fostoria; there may be others.

Q. Now have you, as the basis of this inventory, made use of all of the inventories that have been filed before the Commission in any of your cases where rates were involved?

A. Yes, sir, we have made use of every one of them.

Q. That is, wherever there was an inventory that has been filed with the Commission whether finally approved by the Commission or not, that has been the basis of your inventory as it is filed here?

A. That is right.

Q. And in all of those cases where there had been an inventory filed, was the inventory based upon an actual field survey and count and measurement of all the different items?

A. Oh, yes, sir.

Q. Now those inventories were made and filed over a period of several years, I understand?

A. That is true.

Q. Beginning when?

A. Well, all of them except Columbus and Cleveland [fol. 1750] beginning in 1919 and running up to 1924, I think.

Q. All made within a period of five years then, between 1919 and 1924, excepting Cleveland and Columbus?

A. Yes, sir.

Q. When was the inventory made in Cleveland?

A. 1914.

Q. And since then it has been a matter of natural additions and deductions?

A. Yes, sir, that is right.

Q. Has there been any check in the field in Cleveland to verify the inventory there?

A. There is a check being made at the present time.

Q. But before this inventory was filed in this case there had been no field survey made in Cleveland since 1914?

A. Except the check that is constantly being made by the engineering department in connection with the additions and deductions to property, and also a pole line check, which was about a year and a half or two years ago.

Q. What sort of a check is constantly being made by the engineering department?

A. There is a check and correction made by the engineering department in connection with the addition and deduction of facilities at the time that those facilities are being planned.

Q. That is, whenever any change is made in the property, either by way of addition or taking out old property, and putting in new, the engineering department files a report

showing how much and what is taken out and what is put [fol. 1751] in?

A. Yes, sir, and before they make their plans or, while they are making their plans it is necessary to check what exists in the field so that they may be sure that their new plans will fit in with what does actually exist.

Q. And when that is done, according to your system of keeping records, whatever information is gained in that way is added to or put into the inventory record; is that correct?

A. Well, it is put through the plant accounting and this comes to me in the shape of additions and deductions to the original field inventory.

Q. And is the original field inventory then corrected by you to show these additions and deductions?

A. Yes, sir; they were all corrected before they were put in this.

Q. I mean as a matter of routine from month to month or from year to year?

A. No, sir; not by me; not from the regular routines.

Q. Then you had in your department, in addition to the inventory, the reports of the engineers of all the work that was done in Cleveland, for instance, from 1914 down to this time, and in preparation of this inventory you made the additions and subtractions that were necessary in order to bring the 1914 inventory down to date, in direct connection with these exhibits that are filed here; is that correct?

A. Well, our reports come from the plant accountant; they are first submitted to the plant accountant and he keeps the running record of those changes and I take the [fol. 1752] field inventory and make the additions and deductions to that.

Q. When do you do that? That is what I am trying to get at.

A. I do that whenever it is necessary to make——

Q. To file an inventory for any purpose?

A. Yes, sir, and also at the end of each year and in connection with the preparation of our retirement unit costs; that involves an assembly of all of the plant measurements for the entire property at the end of each year.

Mr. Burr: Was that done in these cases? That is what Mr. McConnaughey's original question was.

The Witness: That is the additions and deductions plat?

Mr. Burr: Yes.
The Witness: Yes, sir, it was.

By Mr. McConnaughey:

Q. Then as I get it, at the end of each year at least you had an inventory that was up to date at that time; is that correct?

A. Of all of the property that existed then, yes, sir.

Q. That is what I mean.

A. Yes, sir, that is right.

Q. Now when was the inventory made in the Columbus case—the case at Columbus?

A. It was made separately for the State and Bell properties and as of two different dates. My recollection is that one of the properties was inventoried in, I believe, 1918, and I think the other one in 1919.

[fol. 1753] Q. And which one was in 1918 and which in 1919?

A. I am not absolutely certain on that, but it is my recollection that the Bell property was in 1918 and the State property in 1919.

Q. And in 1919 the Bell Company did not own the State property?

A. No.

Q. Now in that case you have used the inventory that was made by the Ohio State Company I assume?

A. Well, I might say that I used the inventory that was prepared by The Public Utilities Commission, because they agreed very closely.

Q. When did the Public Utilities Commission make an inventory of the State property in Columbus?

A. I think their work was done in 1920 and the official date of the inventory is, to my recollection, in 1919.

Q. And that was in a rate case?

A. I think that it was, yes, sir.

Q. Was it a full and complete inventory made by the Commission's engineers?

A. Yes, sir, it was a detailed field inventory.

Q. And what you have used in that case do you say is the inventory that the Commission made at that time?

A. I don't know whether I used exactly that one or one the Ohio State prepared, but I know they were checked and found to agree very closely; you might say either one, as far as general purposes are concerned.

Q. And was that checked with the property in the field?

A. By the Commission, do you mean?

[fol. 1754] Q. By you?

A. Well, it could not be checked by me except as I knew of the check that was being made by the Commission, because I was with the Commission at that time.

Q. You were working for the Commission at the time this State inventory was made?

A. Yes, sir.

Q. Is that what you mean?

A. That gives me another check on that; it must have been in 1919.

Q. Did you, as an employe of the Public Utilities Commission, work on this inventory of the Columbus State property?

A. Yes.

Q. And you were willing to accept that for rechecking because of that information?

A. Yes, sir; I knew that it was accurately prepared and it was checked by the Commission.

Q. Then the Ohio State property in Columbus, as it is reflected in the exhibits which you have filed, is not checked against the field conditions in preparation for this inventory?

A. No more than any other one was at a subsequent date.

Q. Now is it true of all of the inventories that you have incorporated in the exhibits, that you have filed here, that you have not gone back and checked the properties against the inventories that you used as the basis for the inventories that you file here now?

A. That is in the field?

Q. Yes.

A. No I have not done that, for two reasons; one is that there would be so many changes since the field inventory [fol. 1755] dates; and the second, because it would be an almost impossible job—the amount of work involved.

Q. Well, I am not particularly interested in your checking an inventory of several years ago against the field, but I mean the inventory or the list of property in any given location that you used in the exhibit that you filed here; has that been checked in the field?

A. That is, if I interpret your question correctly, it means did I check in any locality the property as of June 30th, 1924?

Q. Yes, that is it.

A. And which is incorporated in this inventory? The answer is, No, I did not.

Q. Then what was all of this checking in the field and measuring and counting that you just testified to for several pages in your direct examination? When was that done?

A. As of the field inventory dates.

Q. And there has been nothing of that kind done after the time when these various inventories were filed before the Commission; where they have been filed before the Commission, as to the property that was added after those dates it is a matter from your records in the office; is that correct?

A. That is right.

Q. And that has not been counted and checked?

A. It could not have been done in the time that we had, Mr. McConnaughey.

Q. Well, now, have you a copy of the inventory before you?

A. Yes, sir.

Q. On page 2, at the bottom of the page, or near the bot- [fol. 1756] tom of the page, under the head of "Toledo. Parcel No. 1, Located at No. 1726 Arlington Street, being 123 feet front on Arlington Street and 174 feet deep", you say "To be used for central office building". What is the explanation of that note, "To be used for central office building"?

A. That means that the plans of the Company call for a central office building in the future at that point.

Q. Well, when in the future?

A. I could not tell you.

Q. Do you know of any present plan to commence the construction of a central office building at that location at any given time?

A. It is my understanding that there are plans for the future. As to what definite date, I do not know. My information is obtained from the engineering department.

Q. Do you mean to say that you are referring here to the engineering department for that information, or that you have gotten what you have given me from the engineering department?

A. The latter is true.

Q. You do not know then, as a matter of fact, whether that is within the plans for improvement or development for 1925 or not, do you?

A. Not as to that date, no, sir.

Q. Nor any time within the—the Company has a five year program that has recently been mentioned in the newspaper; is it within that five year period, to your knowledge?

A. I could not tell you.

Q. All that you know of is that the purposes of the Com-
[fol. 1757] pany holding that property is that it is to be used for a central office building some time when the Company needs it; is that correct?

A. Substantially so, yes, sir.

Q. How long has the Company owned that property?

A. I don't know the date that they purchased it.

Q. What is it being used for now? Is it improved property?

A. I could not tell you that offhand.

Q. Can you find out? Who would know that?

A. I can find out whether it is improved, yes.

Mr. Burr: Mr. McConnaughey, do you refer to Parcel No. 3 on page 5?

Mr. McConnaughey: Parcel No. 1 on page 2, Toledo.

Mr. Burr: I find it.

The Witness: By reference to page 23——

Q. Which is the inventory of buildings?

A. You will find that under Building No. 2 there is located at 1726 Arlington Street a two story and basement, brick wall, reinforced concrete construction, fireproof building.

Q. Now is that building a building designed and intended for use as a telephone building?

A. I do not recall that, Mr. McConnaughey.

Q. You haven't any information on that subject?

A. I have no recollection on it. I may have information in the office.

Q. The notation under that heading, however, is "To be used for central office"?

A. That is right.

Q. Does that indicate, according to your method of mak-
[fol. 1758] ing up this inventory, that that is the building that the Company expects to use for a central office?

A. That is my understanding, either as it is or modified in some way.

Q. This is a building that was formerly used by the Ohio State Company, is it not?

A. I am not sure, but I think that it is.

Q. And it was abandoned when the properties were unified?

A. The use was temporarily discontinued I think.

Q. Well, it was temporarily abandoned; let us stick to my word, can't we? Isn't it a fact that the Ohio State Company never used it for telephone purposes; that they built and designed it for telephone use but did not use it for telephone purposes?

A. That may be; I do not know.

Q. As a matter of fact, you don't know anything about this building, do you?

A. Except that we have a building there of the kind that is indicated in the information that I have received from the engineering department as to its future use.

Q. And have you information of your own that the building actually exists?

A. Yes, sir.

Q. You know that as a matter of fact; you have seen it?

A. That is my recollection, yes, sir.

Q. Now on page 4, under the head of "Akron", Parcels 2 and 3 are two parcels that you say are "To be disposed of". What is your purpose in including those if they are to be disposed of?

[fol. 1759] A. Merely to make a complete inventory of all of the Company's property.

Q. Have you carried that out all the way through whether the Company was intending to use the property for telephone purposes or not? In other words, is there anything else in this inventory besides real estate that is to be disposed of or that is not to be used for telephone purposes that you have included?

A. That depends to a certain extent on your definition on what may be properly classifiable as "to be used for telephone purposes". I do not at the present time recall anything besides real estate that in my mind there could be any question, with the possible exception of the loud speaker equipment.

Q. But this definitely is to be disposed of?

A. Yes, sir.

Q. This Akron property?

A. Yes, sir.

Q. And is not to be used for telephone purposes?

A. Not according to my information.

Q. And should not be valued then as a part of your rate base in fixing telephone rates?

A. Well, I think that is a little ahead of the game yet. We have not come to the valuation part of it.

Q. Well, I am asking what the purpose was in including it in this inventory. You expect to put a valuation on all this property, don't you?

A. Not necessarily, no, sir.

Q. I mean you are the man who puts in whatever value is put in, are you not?

A. I suppose so; I cannot tell definitely, but I imagine so. [fol. 1760] Q. And have you put a value on this property that is to be disposed of?

A. I have not.

Q. And have you supervised the fixing of a valuation on that by local real estate dealers or anything of that sort?

A. That is a little ahead of the game, but I will answer it; I have not.

Q. All right. Well, now, as to that property in Akron—those two tracts, one at 29 East Long Street and one at 23 South Highland Avenue, has that ever been used for telephone purposes?

A. I cannot tell you offhand.

Q. Can you find out?

A. Yes, I can find out if you want that information.

Q. It is not being used for telephone purposes at this time, is it?

A. Not that I know of, no, I don't think so.

Q. Do you know how long it has been since it has been used for telephone purposes?

A. No, I haven't that information.

Q. Was that Ohio State property or Bell property before the unification—before the merger of these two companies?

A. I cannot tell you that without referring to my records.

Q. You don't know, as a matter of fact, whether that was abandoned because of the merger of these two companies or not?

A. I haven't that information with me, no.

Q. Well, now, on page 9, under "Cleveland, Parcel 19", there is also a tract that you say is to be disposed of; is that used for telephone purposes now?

[fol. 1761] A. No, sir, not according to my information, it is not.

Q. The Company has no longer any use for it for telephone purposes?

A. My information is to the effect that they have not and that they are going to dispose of it. That is in the same category as the Akron piece.

Q. Well, now, there are a number of others. On page 13, "Dayton, Parcel 6," a property located on South Philadelphia Street; that is an exchange that was formerly operated by the Ohio State Company, is it not?

A. That is my recollection.

Q. And was abandoned in connection with the unification?

A. I think that is correct, yes, sir.

Q. On page 5, under "Canton, Parcel 1", you have noted as "To be used for central office building"; now that is the property——

A. What parcel do you refer to?

Q. Parcel 1—wait a minute——

A. Parcel 3 you mean, don't you?

Q. Yes, Parcel 3 is correct; that is a property located at 405 Cleveland Avenue in Canton, which you say is "To be used for central office building"? When is it to be used for central office building?

A. I haven't any information on it at all.

Q. Is there any improvement on it at this time?

A. I could not tell you that without checking it; I don't recollect.

Q. Did you find that?

A. No, I don't think there is anything on that parcel.

Q. Isn't it a fact that at this present time the Company [fol. 1762] is constructing a central office building at that location?

A. My answer to your previous question was based on the information that I have here as of June 30th.

Q. Isn't it a fact that on June 30th the Company was constructing a central office building at that location?

A. They may have been constructing one but had not completed it at that time.

Q. Now on page 6, "Cleveland, Parcel 3, Located at 18900 Nottingham Road"; you say that it "To be used for central office building"; when is that to be used for central office building?

A. I could not tell you that.

Q. There are similar notations with reference to Cleveland, Parcels 20 and 21, page 9; Columbus, Parcel 6, on page 10; Columbus, Parcel 17, on page 12; Coshocton, Parcel 1, on page 12; Dayton, Parcel 3, on page 13; Springfield, Parcel 1, on page 15; and Toledo, Parcel 9, on page 17; do you have any information as to when any of these properties are to be used for central office building?

A. Not as to when.

Q. Have you any information that any definite present plan exists for the construction of any central office building at any definite time on any of those pieces of property?

A. Oh, yes, I understand that there are definite plans in the engineering department.

Q. As to which of these is there a definite plan to construct a central office building at any particular time on any of these properties?

A. My understanding is that there is on all of them.

[fol. 1763] Q. And when is the building to be constructed at Cleveland, for instance on Parcel 3?

A. I cannot answer the date on any of them.

Q. Well, is it a part of the program for 1925?

A. I could not give you the date on any of them.

Q. You only know that at some time in the future there is expected to be a building at that location?

A. And that we have plans for that in the engineering department, yes, sir.

Q. How long has the Company owned any of these parcels?

A. I could not tell you that without referring to the records.

Q. Do you know how long the Company has owned Parcel 3 in Dayton?

A. No; we have so many properties.

Q. Page 13?

A. No, we have so many parcels, Mr. McConnaughey, that I do not keep those dates on any of them in my mind.

Q. Now Parcel 13 in Dayton is located at 118 West Second Street?

A. What page is that on?

Q. Page 13, Parcel No. 3. Now the Company has owned that property for four or five years, has it not?

A. For some time, I understand.

Q. And before the merger it was the plan, was it not, to put a central office building at that location?

A. And still is.

Q. When is that building to be put up?

A. I will have to give the same answer as I did to the previous question.

[fol. 1764] Q. Will you furnish us from the records the time when the Company purchased each one of these tracts of which I have inquired which are to be used for central office buildings, and also tell us when it is to be used for that purpose?

A. Yes, sir.

Q. On page 5, "Chesapeake", Parcel 1, there is a tract located in the Village of Chesapeake which you say is to be used for river crossing tower; what is that use?

A. There is a tower carrying toll lines and I believe that that is the piece that we discovered in the last week that we hadn't any property on of our own, and when the appraisal is made up it will be eliminated; it is an error that it is in here.

Q. That is one of your two per cent omissions, except that it is an addition?

A. In the reverse direction, yes, sir.

Q. What property is located on that? Is there telephone property located on it?

A. Yes, sir, I understand that there is A. T. & T. property on it.

Q. And on page 7, Parcel 10, located on West 110th Street south of Madison Avenue, you say there is used for a pole yard?

A. Yes, sir.

Q. Just what use is made of that?

A. My understanding is that that is used to store poles in from the time they are unloaded from the cars until they are distributed for use for erection at different points.

Q. Is that a local pole yard for use of poles used in Cleveland or is it a general distributing point for a wider [fol. 1765] territory?

A. I could not tell you that positively; it would either be Cleveland itself or Cleveland and immediate vicinity.

Q. Are there other pole yards in the State that are owned by the Company.

A. Well, whether there are pieces of property used entirely for pole yards I do not know, but I know that there are yards located in various places for the storage of poles, and that that storage of poles takes up part of the property that might otherwise be used, for other purposes. I have in mind the existence of a pole yard here in Columbus in which we store cable and poles. Now that is, according to my recollection, a part of same piece upon which our plant building is located, but there is part of the yard that is used for the storage of poles.

Q. On Page 8, Cleveland, Parcel 13, which is located at 700 Prospect Avenue, you have that divided into three sub-parcels, and you say that Sub-parcel No. 2 is to be used for telephone purposes. For what telephone purposes is that—wait a minute—Sub-parcel No. 2 is described as being 40.58 feet front on Huron Road, 96 feet deep along west line, 89 feet deep along east line and 41.38 feet along rear line. For what telephone purposes is that tract to be used?

A. I could not tell you the specific purpose.

Q. Will you find out?

A. Yes, I have that note on all of them.

Mr. Burr: To refresh your recollection, isn't that a part [fol. 1766] of the property which is to be used for the new central office building in Cleveland?

The Witness: I don't know whether that particularly piece is or not.

By Mr. McConnaughey:

Q. Well, the other two sub-parcels you have indicated are used for Superior Central office building. Now then sub-parcel 2 is to be used for telephone purposes. The thing that attracted my attention about that is that there seems to be a disinction between central office building and telephone purposes. Will you tell us what telephone purposes that is to serve?

A. I will obtain that information along with all the rest of it that you ask for.

Q. Now on page 9, Parcel 23, in Cleveland, located on Huron Road west of and adjacent to Parcel No. 21, you say "Interest in land for proposed Cleveland Main Exchange Building;" what is the interest in land which the Company has there?

A. My understanding on that is that we have contracted to buy that particular piece of land and that that is to be used for a new Main Exchange Building.

Q. You have not yet secured the title?

A. At the present time I could not tell you, but as of June 30th it is my understanding we had not.

Q. Then the point that you intend to indicate by that is that your title was not at that time perfect but that you had some interest in that property?

A. That is correct, yes, sir.

Q. Well, now, will you ascertain the situation as to [fol. 1767] whether or not that has been acquired?

A. Yes, sir.

Q. Going back to Parcel 23 in Cleveland, do you know what use is to be made of that? It says "Cleveland Main Exchange Building"?

A. Yes; it is to be used for the new exchange building.

Q. And when is that to be done?

A. I understand the work has either been started or a contract let.

Q. That you understand is something for the immediate future?

A. Yes, sir.

Q. Now on page 12, Crestline, Parcel 1, "To be used for Crestline toll test station building"; what is a toll test station building; what is that?

A. It is a building housing, or that did house, the Ohio State testing equipment under long distance lines; it is my understanding that it has since been disposed of. At least the use has been discontinued, but as of June 30th, this is a correct listing.

Q. That then should be eliminated?

A. Well, it depends on when that is priced out. Subsequently it probably will. It may be priced out as it stands now, but the application of additions and deductions will probably eliminate it later.

Q. That has though, as a matter of fact, been discontinued as a telephone property?

A. Yes, sir.

Q. Now on page 19, under "Cleveland, Buildings," Building No. 1, located at 18900 Nottingham Road, there is marked "to be disposed of", and on page 6, Parcel 3, in Cleveland, which is described as being located at the same [fol. 1768] location, 18900 Nottingham Road, that land is to be used for central office building. The present building is to be disposed of and the land is to be used; what is the explanation of that?

A. I will have to look that up before I can tell you.

Q. Well, how about——

A. Pardon me just a minute until I get a note of that.

Q. I call your attention to a similar condition on Page 20, where Building No. 6, located at 2064 East 55th Street, is to be disposed of, whereas the land in the same location, being Parcel 20 on page 9, is indicated as "To be used for central office building"?

A. That was Parcel No. what?

Q. Building No. 6, Parcel No. 20, in Cleveland.

A. I would say offhand that that means that those buildings were to be disposed of and new buildings erected but I will have to check up on that to be sure.

Q. Well, now, a similar condition exists also with reference to Building No. 7 in Cleveland and Parcel No. 21, and in Columbus Building No. 1 and Parcel No. 17; will you get us the explanation as to all of those?

A. Yes, sir.

Q. On Page 19, Building No. 1 in Akron located at 706 Blaine Avenue, you say is to be disposed of; is that now being used for telephone purposes?

A. I don't think so.

Q. On Pages 19 to 24 is a series of buildings under the head of "Miscellaneous Investments", all of which are to [fol. 1769] be disposed of; will you look through that list and see if any of those are now being used for telephone purposes?

A. Well, in the first place, there is one on Page 23, being Building No. 2 in Toledo, which is the building at 1726 Arlington Street that was spoken of; that is to be used for a central office.

Q. That is true.

A. I think that is the only exception.

Q. None of the rest of them are now being used for telephone purposes?

A. Not according to my information.

Q. And they are pieces of property which the Company has acquired and has not any use for; is that correct?

A. Future plans do not call for any use for telephone purposes for those particular items.

Q. Have any of those been disposed of since this inventory was prepared as of June 30th?

A. I haven't made a check to determine that, Mr. McConnaughey. There might have been or might not have been.

Q. Well, now, in connection with that, I notice Cleveland, Building No. 1 is located at 18900 Nottingham Road—well, I think I have already questioned you about that and I will withdraw that; the property located at 700 Prospect Avenue in Cleveland, being Parcel No. 13, listed on page 7, do you know whether or not that is a property which The Ohio Bell Telephone Company acquired in the merger with the Ohio State Company, formerly an Ohio State exchange?

Mr. Shuler: I think that is the so-called Electric Building. [fol. 1770] The Witness: That is my recollection, that that is the Electric Building property.

Q. How much of that building does the company use for telephone purposes?

A. I know they use a good bit of it but what proportion I could not tell you.

Q. Isn't it a fact that a large proportion of it is rented to other people for offices and other purposes?

A. I think that it is, and the revenue from that of course goes into our revenue account.

Q. Isn't it a fact that 75 per cent of it is used for other than telephone purposes?

A. I have no positive information on that, Mr. McConnaughey.

Q. Can you get that for us?

A. Yes.

Q. On Page 31, Buildings 12, 13 and 14, you say that Building No. 13 is used for a storeroom; do I understand that to be for the storage of materials and supplies for the Company?

A. I think that is the purpose.

Q. Well, do you know?

A. Not positively without a check.

Q. That is a building that is located at 700 Prospect Avenue; is that a building that was constructed by the Company for storehouse purposes or was it purchased and devoted to that use by the Company after acquiring it?

A. I could not tell you without checking it.

Q. There is a garage listed as Building No. 14 at 700 Prospect Avenue, which you say is to be disposed of?

A. Yes, sir.

[fol. 1771] Q. That is not in use for telephone purposes; that is correct, is it?

A. Well, it might be, but if it is it would only be temporary because the plans for the future call for its disposition.

Q. On Page 37, Dayton, Building No. 3, located at 304 Delaware Avenue and used for central office equipment, do you know anything about how much of that building is occupied by the Company or the exact use that is now being made of it?

A. I cannot recall street locations very well, Mr. McConnaughey.

Q. This is out toward Dayton View or Riverdale at the north end of the town, a building constructed some four or five years ago and lay idle for a time?

A. Partly idle, yes.

Q. Well, wasn't it entirely idle for some time and then just partly occupied?

A. It might have been wholly idle——

Q. It never has been fully occupied, has it?

A. I don't believe it is. It is my understanding though that that building is at the present time—that there is being installed additional equipment, or the plans call for new equipment in there very shortly.

Q. Well, that building was designed originally for a complete exchange, a sub-exchange, with switchboards and everything, wasn't it?

A. That is correct, yes, sir.

Q. And the switchboards have never been put in or the exchange has never been installed, isn't that correct?

A. I wouldn't say right up to the present time. It is [fol. 1772] my recollection that it is either being installed or the plans call for the installation very shortly.

Q. On page 40, under Painesville, Building No. 2 is listed as a garage; what use has the Company for a garage at Painesville?

A. Well, they have use for garage facilities in nearly all of their exchanges and I would be very much surprised if they did not have some use for garage facilities at Painesville, and also this may be identified as used for a garage and it may be partly used also for a supply room.

Q. It is, as a matter of fact, by comparison with Building No. 1, located in the rear of the Exchange Building at that location, isn't it?

A. That is right.

Q. And it is a situation where there are two buildings on the same lot apparently?

A. Yes, sir.

Q. On page 52, which is the appraisal of central office equipment at Akron, you indicate "Three position No. 1-C Western Electric Company Subscribers switchboard section, Each," and under the head of "Quantity", "30"; what does that Quantity 30 indicate as to switchboards?

A. That number of sections.

Q. And that is true all through the switchboard inventory, is it?

A. That is right.

Q. And what is the significance of three positions and two positions in the description of different switchboards in different places?

A. The number of operators' positions per sections.

Q. And which differs in different switchboards?

[fol. 1773] A. Yes, sir.

Q. Well, this designation of the number of positions, does that always mean the same thing as to the capacity of the switchboard, or does it indicate any difference that would affect the value or the use of the switchboard?

A. Why, yes, it indicates a difference and would affect the value for the reason that on your three-position board, for instance, you have your answering jacks multiple three times throughout the section and on your two position you have the multiple twice.

Q. And that is true wherever you say three position or two position?

A. Yes, sir.

Q. So that there is no difference between a three position board at one place and a three position board at another place?

A. Well, if it is identified as the same manufacture and same code number.

Q. Well, it means a definite thing?

A. Yes; of course you may have some little special equipment on one board as against another, but as a general proposition that is a fact.

Q. Commencing on page 80, I notice a number of items of "Protection"; what do you mean by protection?

A. Why, those are protectors for the toll lines entering that particular office.

Q. Protectors?

A. Fuses, carbons and heat coils and such protection.

Q. Protection against what? My ignorance is talking now.

A. Lightning and stray currents of high voltage or low [fol. 1774] currents; what we call sneak currents.

Q. Well, you list that protection as existing at just a few points; isn't that a common incident of telephone equipment every place?

A. Oh, yes, but the reason I listed it specifically at these particular points is because that is the only equipment we have at those points.

Q. At Amherst, for instance, which is the first place you have a lot of protection, "Lot, 1", and as I remember there is no exchange at Amherst; is that correct?

A. That is my understanding, yes, sir.

Q. Now what does that mean?

A. Well, it means——

Q. What are you protecting there?

A. Some of our toll lines. Our toll lines enter that place. We have no exchange there; there is an independent company operating an exchange at that point and our toll lines go in there and the toll lines themselves of course are listed under the outside plant.

Q. But not located; in your inventory you have not indicated where any of the outside plant is located?

A. That is right. I have located all of the central office equipment and land and buildings.

Q. Well, then, at Amherst or any other place like that, where there isn't any telephone property indicated in the

inventory excepting protection, it would mean that you have some toll lines there which this protection applies to; is that correct?

A. Yes, and the value on that protection is small.

[fol. 1775] Q. Well, that is true of a good many things we may inquire about?

A. That is right.

Q. But you have some pretty large figures in your inventory?

A. Well, I just made that remark for your information, that it is small there.

Q. Well, now, a similar condition arises with respect to repeating coils which you have indicated at a number of points I think where you haven't any other property?

A. The same condition applies there; that is all we have at that place.

Q. For instance, on page 85, Fort Recovery repeating coils; a repeating coil is an equipment connected with the toll line that is located here; you haven't indicated anything else at Fort Recovery because you haven't any exchange there, and your toll line is included in your general statement of toll line property elsewhere in the inventory; is that right?

A. Yes, sir, that is right.

Q. And the same thing is true of dialing equipment indicated at Centerburg and Oak Harbor and Pataskala, indicated on pages 83, 90 and 91?

A. Yes, sir.

Q. What is dialing equipment?

A. Why, that consists of the dials and the Company apparatus that is used in dialing at those particular points.

Q. Well, dialing equipment is equipment to dial with, but just exactly what do you mean by that? I would like to know.

A. Well, it consists of a dial and probably some coils in [fol. 1776] connection with dialing long distance numbers on toll lines.

And thereupon a recess was taken until 1.30 o'clock P. M. of same day.

[fol. 1777] Afternoon Session

Tuesday, March 10th, 1925.

And also GEORGE B. WILLIAMS, resuming the stand for further cross-examination, having been heretofore duly sworn, continued his testimony as follows:

Cross-examined.

By Mr. McConnaughey:

Q. Mr. Williams, commencing on Page 101 there are quite a number of pages under Account No. 222, 3-B, "Other equipment of central office". Is the equipment listed in this schedule under this heading confined to such as used by the operating forces as distinguished from the accounting, maintenance and other departments?

A. It is, yes, sir.

Q. The equipment in use in the offices—accounting offices, for instance, is listed elsewhere in the inventory?

A. Yes, sir, under Account 261, Office furniture and fixtures.

Q. Now on page 102 there are listed 180 calculagraphs; what is that, some kind of an accounting machine?

A. The calculagraph is a timing device containing a clock and it is used to stamp the time consumed in the long distance or toll calls.

Mr. Dotson: Is that automatically operated?

The Witness: No, the operator stamps it; it has handles [fol. 1778] on it and the operator stamps it.

Q. On Page 101-a there is a number of book cases; what is the use of those book cases?

A. I could only give you my judgment on that, and that would be that they contain specifications for central office equipment.

Q. In the central offices?

A. Yes, sir.

Q. As distinguished from the engineering department or something of that sort?

A. Yes, sir.

Q. What is the use of those in the central offices?

A. To have handy specifications. They might also be in the operators' rest rooms, containing books for the operators' use, of various kinds.

Q. 812 sand buckets; what is the use of those?

A. To keep sand in those in case of fire.

Q. Where are they kept?

A. In the operating rooms and terminal rooms.

Q. How many central offices are there in the State of Ohio?

A. I gave those figures in my direct examination, Mr. McConnaughey, and I do not recall definitely. I should say probably 150 or 160.

Q. On page 102 are three cabinets for phonograph records and on page 107 there are 578 phonograph records. What is the function of those in the telephone business?

A. They are in the operators' rest rooms and provide amusement and entertainment for the operators during the time they are off duty.

Q. Electric sewing machines, on page 106; what are they used for?

A. Why, they are provided in the operators' rest rooms [fol. 1779] for the operators' use.

Q. Is it for their personal use?

A. It is.

Q. No telephone use?

A. Oh, yes, we consider it as a telephone use, the same as the phonographs; they are some of the facilities that are provided for the operators in order to make their work more attractive.

Q. There is at the bottom of that same page 56 phonographs; they would come under the same heading as phonograph records?

A. Yes, sir.

Q. On that same page are three vending machines; what are they?

A. Probably vending machines in which are provided chewing gum or candy or something like that that the operators can get.

Q. 626 framed pictures; what are they?

A. They are on the walls of the operators' rest rooms; we have those rooms furnished with chairs and rockers and pictures.

Q. 22 pianoes; are they for the entertainment of the operators in their rest periods?

A. Yes, sir.

Q. Radiators, on that same page; what are those, heating equipment?

A. You are speaking of what page?

Q. Page 107.

A. Those are radiators for heating the rest rooms or the operators' rooms.

Q. 30 pairs of scissors, what are they for?

A. I imagine they go along with the sewing machines, for the operators' use.

Q. On page 105 are a lot of gloves, horsehide gloves and asbestos gloves; what are those used for?

[fol. 1780] A. Those are very likely for the use of the central office repair men in handling wires and equipment in making repairs to central office.

Q. There are quite a number of items such as on page 105 "Heating plant, hot water with radiators, 3", on that same page, "Lighting fixtures"; several different items; and then getting back to the radiators again, on page 107 there are 103 of those; now where are the heating plants connected with the other radiators listed in addition to those three that are listed on page 105?

A. You say there are three of those?

Q. "Three heating plants, hot water with radiators", listed in page 105, and then separate*lt* apparently from any other heating plant are 103 radiator sections on page 107. Where will we find listed the other heating plants? You list only three, and evidently there are 103 sections of radiators in addition to that. Is there any reason for the separation of those items?

A. No, not that I know of. I should say that those radiators should be listed with the other radiators and the heating plants not included, but when we come to price them out that is the way we price them.

Q. Where will we find the other heating plants in addition to the three that are on page 105?

A. In the buildings; when we come to——

Q. Well, why aren't these three listed with the buildings?

A. Well, as I say they should probably have been listed with the rest of the radiators; that is just the radiators [fol. 1781] and not the heating plant.

Q. Why shouldn't these heating plants be listed with the buildings?

A. They should be.

Q. Why should not the radiators also be listed with the buildings as a part of the fixtures that go with the building?

A. It doesn't make any difference where you list them, Mr. McConnaughey, just so you don't price them twice.

Q. Are you sure they have not been listed in connection with the buildings?

A. No, because the buildings have not been priced out yet. I am sure they have not been duplicated, if that is what you mean; they have not been listed in both places and won't be when we come to price them out.

Q. How will you know that? Will there be a consistent policy followed with reference to that?

A. Yes, there will be.

Q. What will be the practice?

A. The practice will be that there will be a check made between what is put in the buildings and what is listed elsewhere, and anything that might result in a duplication will be eliminated from one or the other.

Q. Well, is there a definite practice that you follow in the listing of this kind of property and the valuing of it, to include the radiators, heating plants, lighting fixtures and things of that sort as a part of the building or separate from the building, or do you pursue one practice in one instance and another practice in another instance, or have [fol. 1782] you any practice?

A. We have, but both practices have been pursued at different times.

Q. In filing your inventory in the Dayton case did you list radiators separate from the buildings?

A. I don't think so.

Q. In the Akron case?

A. I could not tell you positively about that; and I could not tell you on the rest of them until I look it up.

Q. And how about the lighting fixtures?

A. I could not tell you about that. However, that will be threshed out before we come to value the property.

Mr. Dotson: Do you know what rule or method you pursued in Toledo in reference to that?

The Witness: No, I do not.

By Mr. McConnaughey:

Q. On page 108 there are, at the bottom of the page, three items of kitchen tables, office table and library tables; what is the use of those tables?

A. The kitchen tables are very likely in the kitchen.

Q. But you have a separate list of kitchen furniture here, have you not, commencing on page 110; on page 112 there are 161 wood top tables and several items of tables following that of different classes?

A. Yes, sir.

Q. What is the use of these kitchen tables in the central offices?

A. It might be that they are in the kitchen and not listed there, or they might be and frequently are used in the various offices around the central offices such as the wire [fol. 1783] chief's office, in the basement in the wire room or other places around the central office.

Q. Well, you are not able to say what use is made of these kitchen tables as they are listed on page 108 any more definitely than that?

A. No; there are 138 of them and I do not keep them in my mind.

Q. And where are they located?

A. I could not tell you that without looking it up.

Q. On page 109 there are a lot of typewriters listed; what use is made of them in the central offices?

A. Those are very likely in the wire chief's offices.

Q. Where is that located?

A. That is generally in the terminal room, and the wire chief frequently has a stenographer there doing work partly for him and partly for somebody else.

Q. Are there wire chiefs in each of the central offices?

A. In most of them, yes, sir.

Q. Some of them have typewriters and some have not?

A. Yes, sir, that is right. In the larger offices the wire chief might have a considerable amount of work that it would require a typewriter there.

Q. In the way of reports and things of that sort?

A. Yes, sir.

Q. 75 umbrellas; what is the use of those?

A. Those are in the locker rooms and they are either loaned or rented out to the girls; I don't remember which; on rainy days, and when they forget their umbrellas.

[fol. 1784] Q. Do you know whether they are loaded or rented?

A. No, I do not, but I can find it out.

Q. What are these pocket watches on page 109; what are they used for?

A. I will have to check up on that, Mr. McConnaughey.

Q. What is the use made of these several pages—two pages or three pages, I should say, of kitchen furnishings?

A. Those are in the kitchens where the meals are prepared that are served to the operators in the restaurant maintained for the use of the operators.

Q. What is the practice of the Company with respect to serving lunches; do the operators pay for them?

A. Oh, yes, but they are able to serve them, we think, better meals and at a cheaper price than they can get outside. They are served at cost.

Q. And is that service self-sustaining?

A. It is my understanding that it is, yes, sir.

Q. Are the operators required to take their meals in these places?

A. No, sir, they are not.

Q. Purely voluntary?

A. Absolutely.

Q. And it sustains itself, as you understand it?

A. Yes, sir.

Q. In saying that the service is self-sustaining does that include the equipment that is provided for the purpose of furnishing these meals?

A. My understanding is that all that goes into the cost of the meal; that there is provision made for replacements in wear and tear and that all goes into the cost of the meal.

[fol. 1785] Q. And then if that valuation goes into your rate base and you get a return on it you are paid twice for that service, aren't you?

A. No, because there is no depreciation set up—strike out that answer. I will have to investigate that.

Q. All right; will you report to us on that?

A. Yes, sir.

Q. These kitchens are not maintained in all of the exchanges, are they?

A. No, sir.

Q. Which ones have these kitchens—restaurants?

A. I could not tell you that without checking it up. I can tell you quite a number of them, but not all of them.

Q. It would be in the larger exchanges I assume?

A. That is right.

Q. None of them in the villages scattered around over the State?

A. No, sir.

Q. Tell us which ones do have the kitchens and restaurants as far as you can remember them.

A. Cleveland, Columbus, Toledo, Dayton, Akron, Youngstown, Canton and several more that I believe have, but I would not want to state positively.

Mr. Dotson: Springfield?

The Witness: I imagine so but I am not positive.

By Mr. McConnaughey:

Q. Suppose you look up and report on it also, will you, please?

A. That is the places where meals are served to the operators?

Q. Yes, in restaurants maintained by the Company.

[fol. 1786] Mr. Burr: Do you want the number of exchanges in each place?

Mr. McConnaughey: Yes, wherever there is a restaurant maintained.

By Mr. McConnaughey:

Q. Commencing on page 116 under Account 241, subdivision 4-A, "Exchange Pole Lines", there is a letter classification, classifying the poles, as I understand it, as C, D and E; what is the basis of this classification?

A. They are classifications set up which provide for a certain size top; that is the diameter in inches, and a certain size at the butt; the poles to be classified according to these different letters must conform to these specifications.

Q. It depends on the thickness of the pole, does it?

A. At those places, yes, sir.

Q. Does the length cut any figure in the classification?

A. Oh, yes; that is, the diameter varies according to the height of the pole.

Q. Well, you have a 15 foot average Class D, 20 foot average Class D, 25 foot average Class D, 65 foot average

Class D; now with these varying heights what is the relation of the height to the classification?

A. Well, you have got to have a larger diameter on your higher pole to get the same class letter than you do on the shorter pole.

Q. Well, give us those specifications, will you?

A. What was one of the sizes you wanted?

[fol. 1787] Q. Well, take a 15 foot Class D?

A. That is about a four inch top and about an eight or nine inch butt.

Q. And how about a 20 foot average?

A. That is a six inch top and a nine inch butt.

Q. And a 25 foot average?

A. That is between about a 6½ inch top and about a 10 inch butt.

Q. And the 65 foot?

A. That is about an 8½ inch top and a 19 inch butt.

Q. Now what is the signifivance of the word or abbreviation "Avg"; I read that as average, is that what it means?

A. Yes, sir, that is right.

Q. How is that average determined or how is that term used in that list there?

A. That average is determined by averaging the class of poles on these poles taken in the inventory. Our accounting for the poles added subsequent to the inventory dates only identifies the poles as to height. Now in order to get an average class we have to go back to our inventories in which the classes are taken and obtain the average class from those, and I have applied the same average class to all poles as we found in our actual field inventories.

Q. The word "Average" applies to the class C, D and E, etc., and not to the height?

A. That is right.

Q. Then that means that taking that first item that in the entire system in Ohio there are 1563 poles 15 feet in height that average in this Class D thickness that you have described?

A. That is right.

[fol. 1788] Q. Some of them would be larger and some of them would be smaller but that would strike the average as based upon the average that you have checked up in the inventories you have actually made?

A. Yes; that follows along the same line, Mr. McConnaughey, as, for instance, labor or digging a pole hole; there are no two poles holes that will cost exactly the same to dig, so we have to take an average, and the same thing applies to this class.

Q. Then within what range would those pole thicknesses vary in order to get at this average?

A. Well, they run all the way from double A's to E's, but the average falls close to the Class D size.

Q. And in that average there is no accounting taken of the additions since the inventory?

A. No; I have gone on the basis that they will follow the same class as those in the inventories.

Q. Isn't it a fact that the poles put in recently have tended to be smaller in thickness than the earlier poles?

A. No. If anything, I should say that they were of greater thickness and shorter poles.

Q. Shorter poles and greater thickness?

A. Yes, sir.

Mr. Burr: May I ask a question? Now the shorter pole though does not affect the average? I understood you to say awhile ago that the average does not apply to the height?

The Witness: Well, it would affect it in this way, that [fol. 1789] shorter poles very likely will have a higher class, that is, be a more expensive pole than the poles that I actually found in the inventory.

Mr. Burr: What is that?

The Witness: Because we are putting, if anything—that is, the tendency is toward shorter, thicker poles; that is, we are getting our plant down nearer the ground.

Mr. Burr: Thank you.

By Mr. McConnaughey:

Q. And that is because of the increasing use of cables and the lesser number of wires that you have to string on the poles, is it?

A. Yes, sir, that is true.

Q. That is the principal cause; there are other reasons, I suppose?

A. That is the principal cause.

Q. What effect on this classification does the resetting of the old poles—cutting them off at the butts and resetting them, have; a great deal of that has been done, hasn't it?

A. Some of it; I don't know that that would have very much effect because we frequently not only cut them off at the butt but at the top also.

Q. Well, that is a part of this process of getting the plant closer to the ground, is it not?

A. It has some effect on it but taking into consideration the number of poles that are reset and the fact that we cut them at both ends, that the weight, due to that change, is not very great in my mind.

Q. Well, it raises the classification of the pole, however, [fol. 1790] by making the diameter at the top greater does it not?

A. If anything, in my mind, it would go that way, yes; in other words, the classification probably, due to additions and changes, should, if anything, be higher than I have it in here.

Q. Then the same pole would be in a higher classification and therefore bear a higher price, would it not, because of that process?

A. It should, but I have not made allowance for that in here.

Q. How do you avoid making allowance for it?

A. By basing the average entirely on what we actually found in the field inventories.

Q. Well, if the process of addition put more poles into the higher class, as indicated by the field inventory, it would have that effect, would it not?

A. As far as it would reflect in the field inventory, yes, but there is no account taken of that on the poles that were put in subsequent to the field inventory.

Q. You have included the poles put in subsequent to the field inventories in the total number of poles in a given class?

A. Yes, but I have not made allowance for any increase in the classification due to putting in higher class poles since the inventory because the class is based entirely on what we found in the inventory. Now if the additions since the inventory were poles of higher class I have not changed the classification to reflect that fact at all, but it only reflects what was found in the inventory.

Q. It only reflects the class that was found in the inven- [fol. 1791] tory but doesn't it increase the number in a given class?

A. Yes—yes, certainly it does.

Q. Now what does the price of the pole depend on, the classification or the height?

A. Both; the kind of timber and the time we buy it.

Q. Well, you are assuming that the value is as of the present day—bought now, are you not, or at least approximately this time?

A. Yes, sir.

Q. Now that would eliminate then the question of the time when you buy it, wouldn't it?

A. It would eliminate any original cost on it, yes.

Q. And the cost at the present time varies either higher or lower according to what, the classification or the height?

A. Both.

Q. A 15 foot Class D pole costs more or less than a 15 foot pole Class C?

A. Less.

Q. Is there an A and B in the classification?

A. Yes, sir, and Double A.

Q. You haven't any of those in this list, as I see?

A. We haven't any of a particular height that averages as high as A or B, no; the average for the different classes of poles, with the exception of the two last items, which are Class B, are all C, D or E; that is, less expensive than your A or B.

Q. Then you have taken the total number of poles of a given height and averaged all the poles of that height—averaged the diameters of all poles of that height to determine this classification or this listing that you have on page 116?

A. Well, I did not average the diameter; I averaged them [fol. 1792] on getting the same effect by pricing them out.

Q. Well, tell us just exactly how you did arrive at these averages?

A. We took all of the poles that were actually taken on the field inventories. For instance, on your 25 foot poles, and we found so many Double A's, so many A's and so many B's, and on down, and priced them out on the price of the pole; that is what we found in the field inventories; and divided them by the total number of poles that we found in these field inventories, and we got an average price which fell closest to the price for a Class D pole. Then we went on the theory that all 25 foot poles added since the field inventory dates, and on which the accounting records did not

show the class but the height only, that they would all fall in the average Class D also.

Q. So that in your calculation you did not actually figure on the diameters at all but took the price that you have determined upon, or did determine upon, in your inventory as the guide to determine the classification?

A. Well, those prices, Mr. McConnaughey, were all on the basis of the diameter; they were all on the same level as of the same time.

Q. That is, all Class D 25 foot poles were priced at the same figure?

A. Yes, sir.

Q. And you took, I suppose, just the bare cost of the pole in taking that without adding the cost of transportation and setting and everything else?

A. That is right; now of course the reason that we did that [fol. 1793] was *was* because it is very hard to get a proper weight for the different classes unless you convert it into some common measure, such as money. And that is the reason we did that.

Q. Then according to that method of listing, or of classifying, I should say, each pole in any given class of a given height would ha-e the same price?

A. I think I get you on that, but to be sure, will you read the question?

(Question read.)

A. I do not believe that I quite get at whether you meant at the time they were worked up to get the average price or afterwards; will you state it in another way? Maybe I will understand you better.

Q. Well, you have already said that you took the same price at the time you made your calculation as to the average; now I am asking if in working that into a valuation you would expect to put the same price on each pole of a given class of a given height?

A. Yes, unless I found that there had been too much variation as between classes.

Q. Well, I am asking you *bow* what happens in a certain class; what would indicate to you that there was too much variation in the classes?

A. Why, what I mean by that is a swing in prices; that is, if there had been—suppose that there had been a con-

siderable change in prices between the time that I arrived at my average class and the time I expected to set up my unit costs for that average class to be included in the valuation; then I would want to be careful that all of the poles of each height had swung up or down in about the same level so that I would not get too much variation or that the [fol. 1794] average class would not be out of line too much at the time I make my valuation.

Q. Well, in any swing of pole prices all classes would be affected alike, would they not?

A. Not necessarily, no, sir.

Q. What would make the difference?

A. Supply and demand I suppose; all I know is the effect.

Q. That is, there might be a demand for smaller poles or larger poles that would affect the price of that particular class?

A. Yes, sir.

Q. And that would not affect your listing or your classification because that price would be the price you used in the inventory from which you take these classifications?

A. Well, I don't know; it might; it might change my classification; in other words, I would want my average class that I used in my valuation to reflect the average that I should arrive at based on prices prevalent as of the time I made my valuation.

Q. Then, as a matter of fact, it is possible that when you come to set prices on these classes of poles you may change this listing altogether?

A. It is a bare possibility, but not likely. I am giving you all the outside changes that might occur.

Q. On page 116 you have listed a number of subsidiary items which you say you expect to take into consideration in evaluating these poles and they include 21 different items; would you expect to add to the cost of each pole something to cover each one of those 21 items?

[fol. 1795] A. That is right.

Q. Whether or not the particular pole had all of those incidents attached to it?

A. Yes, sir, I would put those in on the average basis because I know from my field inventories just about how many of each one of those items there are on an average per pole.

Q. For instance, you would figure on each pole on pavement setting, that is setting in paved streets or alleys, as I understand?

A. A certain amount for each pole; it may be on the basis of a unit, only a fraction of a pole set in pavement; in other words, for instance, if we have 680,000 poles in our plant and there were, say, roughly, 230,000 of them set in pavement, I would allow one-third of the cost of setting in pavement, or approximately that, for each pole.

Q. And how would you determine the amount to be added to cover all these various items?

A. I determine that from the actual count of those associated items that we found in the field inventories on the properties that were inventoried.

Q. And you assume that all of the poles that have been added would have these associated items in the same proportion?

A. Yes, and I think that I am conservative in doing that.

Q. Why?

A. Because we are going in for higher standards and specifications each year.

Q. There is more butt treating?

A. Yes.

Q. And more pavement to be reckoned with?

[fol. 1796] Yes, sir.

Q. And more of the different items, all of which add to the value of the pole as it is set in place as well as to its cost?

A. More anchors and more guys and more of all of that per pole each year.

Q. Item 2 on page 116 is 18 foot average Class E; the number or quantity is 7808.2; what is the explanation of the 2/10?

A. Proportion of ownership.

Q. How is that determined?

A. By adding up all of the fully owned poles and all of the jointly owned poles.

Q. Have you shown in these inventory exhibits what poles are jointly owned and what are not?

A. Not separately. They are all converted to the terms of full ownership.

Q. You have not shown what Companies you share ownership with or anything else excepting that—this does not

represent then necessarily that this Ohio Bell Telephone Company owns 7808.2 18 foot Class E poles, does it?

A. The equivalent of that.

Q. The equivalent of that determined how?

A. By adding, as I have stated, the fully owned poles and the Ohio Bell Telephone Company's proportion of the jointly owned poles all together.

Q. That is, if it had a half ownership with some other company in some particular pole, that pole would be represented in this total by one-half?

A. That is right.

[fol. 1797] And any other proportions in the same way?

A. Yes, sir.

Q. The fraction in the number of crossarms is explained in the same way, is it?

A. Yes, sir.

Q. How many poles are actualy set in pavement; you used a figure of 230,000; yoi don't mean to say that there are that many set in pavement?

A. No.

Q. That was simply an illustration?

A. Simply an llustration, yes, sir; I could not tell you that, Mr. McConnaughey: I could tell, or I could find out, the actual number that are set as reflected in the field inventories, but that is a minor item and is not carried in our accounting specifically.

Q. Do your field inventories, which you have said are at the basis of this inventory that you have filed in this case, cover all of the poles that are used in this system?

A. As of the dates of the inventories, yes.

Q. All of the distributing system of the Company has at some time or another been covered by an actual field inventory?

A. Yes, sir.

Q. All of those inventories, however, have not been filed with the Commission in rate cases or in other cases, have they?

A. There may have been a few, but there are not very many.

Q. That have not been filed?

A. Yes.

Q. And from those field inventories to which you have added the additions and subtractions since the dates of the

[fol. 1798] inventories you determine that the total number of poles in the system is as indicated on page 116; is that correct?

A. That is right.

Q. And are all of these poles in actual use for telephone service?

A. As of June 30th, 1924, they were, yes, sir.

Q. This inventory was made up during the several weeks prior to October 1st, 1924, was it not?

Mr. Burr: Prior to December 1st.

By Mr. McConnaughey:

Q. I should say December 1st. I mean December 1st.

A. Yes, sir, that is right.

Q. And at that time, as I happen to know, there was on the Springboro Pike, extending south from Dayton, a toll line formerly operated by The Ohio State Telephone Company but not then in use, as indicated by the fact that at several points along the line there were points where the line was broken, the wires were not connected from one pole to another; now are those poles included in this inventory?

A. I could not tell you specifically; the accounting as of June 30th, 1924, might have taken them out of the inventory and it might not yet have done it. That is the reverse of the condition where we have construction work in progress. That is, if these poles were in our records but the use had been discontinued they would be removed from the records subsequently. On the other hand, construction work in progress works just the reverse, that we haven't got that in here but that they will be put in use very shortly. You have those conditions going on all the time.

[fol. 1799] Q. At that time, as a matter of fact, there was a very considerable amount of work of that kind due to the unification of these two systems that was in progress; isn't that true?

A. Do you mean both as to additions and deductions?

Q. Yes.

A. Yes, sir, that is right, I think there was.

Q. The property was in a state of transition, you might say; have you any means of knowing the amount of property that was involved in situations of that kind?

A. No, but, it is my impression that the most of it that was to be taken down would have been taken down and was

taken down before June 30th, 1924, because we had unified in all of our exchanges, I believe, at that time except Columbus.

Q. And how about toll systems; had they been unified?

A. To a very considerable extent.

Q. Now in these cases of joint ownership of poles, upon what did you base your calculations as to the joint ownership? What was the source of your information?

A. Contracts covering the ownership.

Q. And have you, or did you have access to the contracts with reference to all the cases of joint ownership in the State of Ohio in getting at these proportions?

A. Every one that we had covered by a contract, yes, sir.

Q. How are these joint ownership matters covered; are they all covered by contract?

[fol. 1800] A. The big majority of them are.

Q. Well, how are the others covered?

A. Simply by knowledge of the employes who set the poles and have been using them for a good many years.

Q. Take the case of the City of Dayton, for instance; the joint ownership of poles there was determined how?

A. By taking the contracts that we had in effect and later correcting that with an agreement as to the poles.

Q. Did you use in that instance the maps that were filed in the Dayton case as indicating an agreement with The Dayton Power & Light Company?

A. We did, and corrected our records, and I supplied the plant account with the correction, taking into consideration the condition existing after the agreement.

Q. So that this inventory and your plant records now show as between you and The Dayton Power & Light Company the situation that was exhibited by the exhibit that was offered in this case before the Commission on that subject?

A. Yes, sir.

Q. I mean in the Dayton case?

A. Yes, sir.

Q. On Page 129, "Distributing System, 4-C, Exchange Aerial Wire", the first item is, under the heading "Bare iron", ".203, Unit, Mile; Quantity, 4.679 miles"; what is the significance of the figure under Bare Iron ".203"?

A. A decimal of an inch in diameter.

Q. That indicates the size of the wire, does it?

A. Yes.

Q. At the bottom of that page, under the heading "Drop [fol. 1801] Wire", you list "Drops (average 17 twisted pair C. S.); Unit, each; Quantity, 357,564"; what is the significance of the part that is in parenthesis "Average 17 twisted pair C. S."?

A. That is a condition parallel to the average class of poles; that is, that the total number of drops averaged closest to a No. 17 twisted pair copper steel drop.

Q. What is the No. 17; what does that refer to?

A. 17 is the designation corresponding to a certain diameter for a copper steel drop—copper clad steel drop.

Q. That refers to the size of the wire?

A. Yes.

Q. And that means that you have 357,564 copper steel drops of twisted pair No. 17 wire?

A. That is right, yes, sir.

Q. There is not any other size of wire that is used for the drops, is there?

A. Oh, yes.

Q. Well, the average then refers to an average of—what is averaged in that calculation?

A. All of the different kinds, Mr. McConnaughey, whether they are iron drops, bare drops, copper drops, copper steel drops, weather-proof drops, or whatever they are, but averaging those up that were taken in the field inventories they fall closest to a No. 17 twisted pair copper steel drop.

Q. That is, to the price of a No. 17 twisted pair?

A. That is right, and that was taken because the accounting in that respect is similar to that for poles in that the drops added since the dates of the field inventories are not covered as to the kind of a drop; they are simply carried [fol. 1802] as so many drops; that is to simplify and make less expensive our accounting.

Q. Are all of the drops twisted pair drops?

A. Oh, no, we have all of those different kinds that I spoke of.

Q. As I understand your different kinds, you speak of different materials?

A. Oh, no, we have the bare drops, as I said, which may be either iron or copper, mostly iron, and these iron drops may be different sizes, 12, 14 or 16 guage, and we have all weather-proof drops which may be different guages, and we

have the No. 17 twisted copper steel, and we may even have some iron; I rather imagine we have.

Q. And the prices of these different classes of drops vary?

A. Yes.

Q. In determining the average price, what prices did you use from your inventories; did you use the prices that were used in all of your inventories?

A. We priced them all on the same level very recently.

Q. How recently?

A. Within the last six months.

Q. As of what date did you take those prices?

A. I don't recollect, Mr. McConnaughey; probably about the—either the first or middle of 1924.

Q. And is that also true of the poles, that you took those prices recently?

A. Yes, sir.

Q. Then you did not use the prices that were used in the inventory—in the appraisals that were filed; you simply [fol. 1803] used the inventories that were filed?

A. Yes, sir, because if we had done that—if we had done the former thing you speak of, you will recollect some of our appraisals have been filed here on a five year average and some on current cost basis, and that would have thrown us clear out of joint.

Q. But you took the actual price at a given day?

A. That is right.

Q. You did not set up an arbitrary price but you took the actual market price?

A. That is right. Now I might say in explanation that this is reasonable; that that would fall to a No. 17 twisted pair copper steel drop for the reason that by far the larger proportion of our drops in the plant and that are being put in are a 17 copper clad drop.

Q. Is that the situation now?

A. Yes, sir.

Q. That is, that is the modern practice?

A. Yes, sir, and that was the situation in the field inventories.

Q. Now did you in determining or working up the data in reference to your drops pay any attention to the length of the drops?

A. Oh, yes.

Q. That does not appear in the inventory though?

A. Oh, no.

Q. You have considered one drop the same as another, whatever its length might be, is that correct?

A. I have simply set out so many drops in the inventory; now of course we arrived at an average length of drop [fol. 1804] taken from our field inventories, just the same as we arrived at the kind of a drop, and that will be reflected when we come to price out the inventory and convert it into an appraisal.

Q. Did you determine from the inventories that you have referred to the average length of drops that you used in making your calculation?

A. Oh, yes.

Q. Isn't it a fact that in the Dayton inventory your drops were listed by number without reference to the length, just as you have listed them here?

A. I think they were listed that way, yes, but we had the average length of them.

Q. What is the average length that you have figured on here?

A. I don't recall that, Mr. McConnaughey.

Q. Shouldn't that appear here so that we may know what you are figuring on? (No reply.)

Q. Will you get that information for us?

A. Yes, I will be glad to furnish it to you.

Q. And will you also furnish us the supporting data upon which you have figured the average classification of your poles and the average of the classification of your drops?

A. I cannot very well give you all that because it is too voluminous. I can give you the average that I found in the different cities and the numbers that I found; that is, in some typical cases, but you see I have got probably 155 exchanges here incorporated into this inventory.

Q. And you say that you figured on the poles and the [fol. 1805] drops in all of these 155 exchange areas in order to get this basis?

A. Yes, sir.

Mr. Burr: Now, Mr. Williams, I think that Mr. McConnaughey is entitled to the best you can give him within reason in the way of supporting data; I think he is entitled to have it all if he wants it. I assume from your explanation

that perhaps he won't want it all but I think he ought to have something, and it would be my suggestion that you find out from him just what he would like to have within the rule of reason that I have suggested and that you furnish it.

The Witness: I will be glad to furnish anything that is thought reasonable.

Mr. McConnaughey: Well, I don't think any of us care to wade through the whole proposition, but we would like to see enough of it to know just exactly how the thing was done and enough to test the accuracy of it. Now I think we can leave that somewhat to your judgment and if it does not seem to satisfy, after we see it, probably we can ask you for some more.

By Mr. McConnaughey:

Q. Did you check the whole—all of the properties in the State, to get the average length, for instance?

A. No, sir.

Q. How did you go about that?

A. We took a certain number in each exchange and measured a certain number in each exchange.

Q. How did you select the ones you measured?

A. Took them at random.

[fol. 1806] Q. You took each of the 155 exchanges and measured some of the drops in those exchanges?

A. I would not want to commit myself positively on every single exchange in the State, but in the majority of them, yes, sir.

Q. Enough you think to get a typical representation of the actual situation as it exists?

A. Yes, sir.

Q. And you do not recall what the average length was that was used?

A. I cannot for the Company as a whole, Mr. McConnaughey, for the reason that some exchanges will average just about 100 feet or a little more. Some of them will run 115 and some 125 and maybe 150 feet in others.

Q. Well, for the purpose of this particular line on page 129, you did arrive at some average length, did you not?

A. Yes, sir.

Q. And that you do not now recall?

A. No, I do not.

Q. But that you will furnish to us?

A. Yes, I will give you the average length.

And in connection with this information you have asked, your request, as I recall it, asked for two things; enough to see how the work was done, and enough to test the accuracy. Now I can bring you enough to show how the work was done, but I am not quite clear in my own mind what would mean to you enough to test the accuracy unless you had the whole thing.

Mr. Burr: How many did you measure?

The Witness: I could not tell you that offhand; we measured quite a number in each exchange.

[fol. 1807] Mr. Burr: Does it run in the tens or hundreds of thousands?

The Witness: Thousands of them.

By Mr. McConnaughey:

Q. Well, will the number that you tested and the principle of selection that you followed be a part of what you propose to furnish to show how this was done?

A. Yes, sir.

Q. Mr. Williams, on page 133 of the inventory, Volume one, begins your schedule of exchange underground conduit. Under the head of "Single tile" you have "4 Duct, O. B. T. Company 89 per cent; A. T. & T. Company 11 per cent; Unit, trench feet; Quantity, 657.3"; what is the significance of the O. B. T. Company 89 per cent and the A. T. & T. Company 11 per cent?

A. That means that the O. B. T.'s proportion of 89 per cent is 657.3 feet.

Q. How did you arrive at that result?

A. That is taken from the contracts between the companies.

Q. Well, how did you arrive at those figures?

A. The percentages?

Q. Yes.

A. They are in the contracts.

Q. What is that contract?

A. It is a contract covering the ownership of the particular duct run.

Q. What is the basis of division between the two companies; does the contract specify that the A. T. & T. Company is to own 11 per cent of that run?

A. Yes, sir.

Q. What is that, a single run in some isolated location or some particular location?

A. That is a single run in a particular location. You will [fol. 1808] note that under the 4 Duct there are four different divisions as between the two companies. Now in one run the A. T. & T. will own a certain per cent and we will own the balance, and in the next run it is different, depending upon the particular run and contract covering that run.

Q. Now is there a special contract for each one of these various items where there is a division of ownership as there is in that item?

A. Yes, sir.

Q. Have you those contracts?

A. I don't think we have at the present time. We got them to determine this ownership.

Mr. Burr: What do you mean by "we"?

The Witness: The appraisal department.

By Mr. McConnaughey:

Q. Who laid this 4 duct run, the first item of that kind on page 133?

A. I could not tell you positively; it might have been laid either by the Ohio Bell or the A. T. & T.

Q. Where is it?

A. I could not tell you. I have that information but I haven't it here.

Q. Is the use divided according to the number of ducts that one or the other company uses?

A. How is that question again, please? I want to get one word in it?

(Question read.)

A. Do you mean use or ownership?

Q. Well, say ownership; that is a better word.

A. The ownership—I don't believe that the ownership is always divided on the same base; that is, in some cases it may be the use and in other cases it may be the cost [fol. 1809] basis. However, this represents our proportion of the ownership.

Q. Well, now, where it is the cost basis, how is the cost divided; upon what principle of division?

A. In the majority of cases my recollection is that it is the number of ducts.

Q. Well, now, in this 4 duct run, of course it is not possible for the A. T. & T. Company to use any number of ducts that would equal 11 per cent; what would be the basis there?

A. Well, there are several factors that may affect that, Mr. McConnaughey. That is, single tile and two duct may have been laid out first and then another duct or two added later and the proportion of ownership divided differently.

Q. Well, will you produce for us the data with reference to that particular run of duct, telling us its location, its manner of use and the contract that supports the division of the ownership?

A. I will endeavor to do that, Mr. McConnaughey.

Q. And will you do the same thing with reference to all of the items where divided ownership is shown from page 133 to page 146 of the inventory—of Volume one of the inventory?

Mr. Burr: Does that include all of the percentage ownerships on pages 133 to 145 inclusive?

Mr. McConnaughey: Yes.

(Question read.)

The Witness: I would like to state that the request will [fol. 1810] involve a very considerable amount of work. It will mean the collection of all of these contracts from the different exchange, divisional and general offices.

Q. Well, the point to the question is that when the City of Dayton suggested that a division of the use of a duct was possible as between what was used and what was not used, we were very voluminously ridiculed; evidently the Company has some system of dividing a duct, and we would like to know what it is. I think I may safely say that a majority of these divisions are not on the basis of any possible use of any combination of whole ducts and we would like to know what the explanation is, and we think we are entitled to it.

A. Wouldn't it be sufficient, Mr. McConnaughey, to give you typical items in there rather than the whole thing?

Q. I think since you say that each item is based upon a separate contract we ought to see the contracts, if the Commission please.

Mr. Burr: There are 120 of those items.

Mr. McConnaughey: Well, we are assuming that some of them cover more than one item; I don't know.

The Witness: I will do the best I can, Mr. McConnaughey.

Q. All right. Angels can do no more. Now, on page 146 there is an item, the last item on that page, "Trench for buried cable, 29543.2"; what does that mean?

A. That means that we have that many feet of cable that is buried in the ground without conduit and that we are [fol. 1811] setting that up as a property item for the reason that to bury the cable you have to dig a trench to put it in.

Mr. Burr: One of the r's should be eliminated from the word "buried", should it not?

The Witness: It should be.

Q. When is that done; under what circumstances do you do that sort of thing?

A. That is not done very frequently. That might be a lead to some submarine cable or it might be some buried cable that was taken away from the Ohio State in the consolidation.

Mr. Burr: Would you like the detail of that, Mr. McConnaughey, just what it represents?

Mr. McConnaughey: Yes, we would like to know.

Q. You don't know where it is located, as a matter of fact, right now, do you, Mr. Williams?

A. No, sir, I do not.

Q. Do you know if there are several items of that kind that are combined in this figure, or is this a single instance?

A. Not without checking it up I do not know.

Q. And you haven't anything you can now give us with reference to the Company's practice in that respect in the use of cable buried in trenches without conduit?

A. Well, as I say, it is not done very frequently at the present time, and in comparison with the total amount of underground cable it is a very small item.

Q. Going back to the underground conduit, I notice a great many of the items have a fraction in the quantity; [fol. 1812] that is, on this item that we have been talking about, on page 133, the total is 657.3; that fraction arises

from the fact that you have taken 11 per cent of some total length that figures out that way, does it?

A. It might be, and it might be that the original measurement was a fraction of a foot. We measured that to foot and inches.

Q. Well, that is not explained as was a pole ownership fraction, by reason of the diversity of joint ownership, excepting as it is reflected in that percentage figure?

A. It may be partly that and it may be partly due to the measurement itself.

Q. All right; commencing on page 155 we have under "Exchange underground conduit", several pages—well, parts of two pages of paving; in that total or in those totals that you have shown there of various classes of paving, have you included all the paving over conduit?

A. Yes, sir.

Q. Whether the Company has cut it or placed it or not?

A. Yes; on the reproduction theory that if we replaced it we would have to cut it.

Q. Notwithstanding the repeated ruling of this Commission that that is not proper, you have put that into this inventory?

A. Yes, sir.

Q. How much of the paving that you have shown in this inventory is paving that the Company has actually placed or cut and replaced?

A. I haven't any idea, Mr. McConnaughey.

[fol. 1813] Q. Have you in your files any information on that subject?

A. No, sir.

Q. You are not able to supply the Commission with the figures as to how much paving would be included that you have actually placed or have actually cut and replaced?

A. I don't think it would be possible to get that at all.

Mr. McConnaughey: We move that pages 155 and 156 be stricken from the record.

Chairman Marshall: The motion will be overruled at this time. It will be a question of the exception to the allowance made in fixing the tentative valuation.

Mr. McConnaughey: Note an exception.

Q. On pages 182, 183, 184 and 185 there are a number of items apparently indicating joint ownership of aerial cable

as between the Ohio Bell Company and the A. T. & T. Company; commencing with the first item of that kind on page 182, will you tell us what is the basis of division between these two companies as to these various items?

A. In regard to 182, the single item on that page——

Q. There are two items together.

A. Or two items—I beg your pardon—there seems to be some information lacking. The information is shown on the other items of a like nature. For instance, take the last item, that is owned jointly by the A. T. & T. and the Ohio Bell.

Q. Where is that, Mr. Williams?

[fol. 1814] A. The third item from the bottom, consisting of 90,126 feet—page 183—consisting of 90,126 feet.

Q. All right.

A. Now that cable is divided into 12 quads of 16 guage, of which 4 quads belong to the A. T. & T. and 8 quads to the Ohio Bell. That same cable also contains 46 quads of 19 guage, of which 20 quads belong to the A. T. & T. and 26 quads to the Ohio Bell. And it also contains two pair of 22 guage cable, of which one pair belong to the A. T. & T. and one pair to the Ohio Bell. In other words, that sets out specifically what is owned of the different quads of the different guages and of the two pair of 22 guage.

Q. What is a quad?

A. A quad is four pair.

Mr. Burr: Do you mean that the same thing should be shown on page 182 and is not?

The Witness: Well, I want to check on that. There is some information that is missing, and I cannot say positive what it is. I want to check that up and see.

By Mr. McConnaughey:

Q. Well, how is the proportion carried into the total quantity there?

A. The total quantity is not divided at all. We cannot very well divide it on the basis of so many feet because it is divided not altogether on the basis of pairs, but partly on the basis of pairs and partly on the basis of quads, and also those quads and pairs vary in regard to the guage of the wire, so that the only information that is set out on that is the specific information as to the ownership in regard to each of the different quads and pairs.

[fol. 1815] Q. Well, do I understand that the total quantity including both ownerships of that particular item is 90,126 lineal feet?

A. That is right.

Q. And that is to be divided when you come to fix the valuation according to these figures?

A. It will have to be split up on that basis, yes, sir.

Q. The quantity, however, is not divided in this case as you have done in the case of the conduits or poles?

A. No, on account of the varying sizes of the different kinds of wire owned by each company.

Q. A composite cable is what?

A. A cable containing different kinds of wire. For instance, you have an item up there at the first—the first item under "composite cable", which shows 8 quads of 13 guage owned by the A. T. & T. Company; 48 quads of 16 guage, owned 9 quads by the A. T. & T. and 39 quads by the Ohio Bell Telephone Company; and 26 pair of 19 guage cable owned by The Ohio Bell Telephone Company.

Q. Well, then, in order to get at the value of that 90,126 feet that we were talking about a moment ago, you would get the value of the 16 guage and divide that 8 and 4, and likewise the value of the 19 guage and divide that 20 and 26, or how would you do it?

A. Why, we get the value of the cable made up of those different quads and pairs and divide it on the basis of the relative value of those different kinds of wire, getting back to the weights or cross sections of the different kinds of wire.

Q. Well, now as to all of this aerial cable, it is the purpose [fol. 1816] to divide according to this plan that you have described?

A. Yes, sir.

Q. There is nothing arbitrary or nothing covered by any special agreement in reference to that?

A. Oh, it is my recollection that the division of ownership as between the quads and *a*pirs that are owned by the two companies has back of it a contract. I was talking in the first place about the evaluation of the different proportions. The contract, as I recall it, only speaks in terms of quads or pairs.

Q. Without fixing any arbitrary percentage, or so it seemed to me, with reference to the conduit we were talking about a moment ago, but leaving that to be determined according to the capacity of the pairs in the cable?

A. That is my recollection, yes, that it simply speaks in terms of pairs and quads.

Q. Now you have examined that contract in preparing this inventory, have you?

A. Yes, we had these contracts to prepare this.

Q. Is that covered by a single contract?

A. It is my recollection that it is.

Q. Will you produce that contract?

A. Yes, I will produce that.

Q. On Page 188 you list toll underground conduit; there are two items on that page where there is a division between the A. T. & T. Company and The Ohio Bell Telephone Company; the first is the division of conduit and the second of manholes; what is the basis of division there?

[fol. 1817] A. My recollection on that is that the conduit itself is covered by the contract which gives to the A. T. & T. three ducts and to The Ohio Bell Telephone Company one duct, and that the manhole or manholes are divided in accordance with the ducts entering those manholes. In other words, it is my recollection on these two particular items that the manholes listed below are associated with that jointly owned conduit above, and that the ownership of the conduit is on a basis of 25 and 75 percent ownership, and that the manholes are divided on the same basis.

Q. Where is that located; do you recollect that particular instance?

A. I am not sure whether that is the Akron-Cuyahoga Falls run or not; it may be.

Q. Well, the total run in that multiple type four duct, of which the unit here shown is 2226 feet, would be four times that much?

A. Yes, sir.

Q. And this figure 2226 represents only the Ohio Bell Company's share of that?

A. Yes.

Q. On pages 190, 191, 192 and 193 there are a number of other items of toll underground cable showing joint ownership apparently; will you, in connection with other information of that kind, give us the basis of the division there?

A. On all of the items?

Q. Yes.

A. I will do the best I can, Mr. McConnaughey.

Q. Again I say, Angels can do no more. In Volume 2, at the bottom of page 3, where you are listing station equip-

ment, you have an item "Vacant premise 6610"; that is [fol. 1818] under the heading of Station Apparatus; what does that mean?

A. Station apparatus in vacant premises.

Q. That is station apparatus in houses that are not occupied?

A. Yes, sir.

Q. Telephones not in use?

A. Yes, sir.

Q. And on June 30th, 1924, there were 6610 instances of that kind in the State of Ohio?

A. Yes, sir; that is just like wires in cables or ducts in trench runs that are not entirely used at a particular time. There is always a certain amount of surplus facilities that have to be provided and the subscribers are constantly changing, a certain proportion of them, from one place to another, and the instruments in those houses nevertheless represent investment that the Company has.

Q. Well, do those cases arise where a consumer has vacated a house that is temporarily vacant and you leave the instrument in the house for the use of the incoming tenant?

A. They are left in there for a short length of time to see whether somebody else comes in and takes them or subscribes to the service, to obviate the necessity of going out there and bringing it back in, moving it and disconnecting it.

Q. Do you consider that as a part of the surplus equipment that the Company considers it wise to carry?

A. Yes, and is necessary to carry, and reflects the normal condition that we have all the time.

Q. Would you say that this number 6610 is an average number that ordinarily exists in the State?

[fol. 1819] A. It is not very far from the average.

Q. Do your regular reports carry an item showing the number of vacant premises that are in the system from time to time?

A. Yes, sir.

Q. You have a systematic report on that, do you?

A. Yes, sir.

Q. What is your practice when a house is vacated or a service is discontinued with reference to leaving or removing drop wires on that house?

A. It is usually left there.

Q. How long?

A. It varies in different cases and in different places;

sometimes they are taken down and sometimes they are left there indefinitely.

Q. What is the difference; what determines whether you take them or whether you leave them there indefinitely?

A. Why, the decision of the plant people themselves.

Q. What is the purpose in leaving them there?

A. A good bit the same as the station, to obviate the necessity and expense of removing them and taking them down, in case somebody else should move in there and desire a telephone connection.

Q. But if nobody does move in there and desire a telephone connection it is still in a great many cases, left there indefinitely; is that correct? Whereas, in the case of the apparatus, that is taken out?

A. Yes, that is true, because the recovery of the piece of apparatus is less expensive than is the removal of the drop, [fol. 1820] and the value of the apparatus is more than that of the drop.

Q. Well, is it because the Company does not consider the drop of sufficient value to justify its removal that it is left in place?

A. The cost of removal is one of the factors that has to be taken into consideration.

Q. Well, what are the other factors that determine the Company in its practice of usually leaving these drops in place indefinitely?

A. The other one that I think of is the one that I mentioned, that somebody else may come in there and require a drop.

Q. And what determines the Company in sometimes recovering these drops?

A. Well, that is a plant matter, Mr. McConnaughey. It is up to the plant people.

Q. Well, doesn't the Company have a routine or practice that they are expected to follow in that respect?

A. I think they do but that is outside of my department.

Q. You don't know what the practice is in that respect or what the principle is upon which that is determined by the plant people?

A. I cannot give you that.

Q. The Ohio Bell Company—I mean the Ohio State Company, before it was merged with the Ohio Bell Company, had of course a great many drop wires, or drop wires in every case where its line was extended into the house, didn't it?

A. Well, either drop wires or cable connection.

Q. Well, usually drop wires in a residence?

A. In a majority of cases, yes, sir.

Q. And there were a great many cases scattered over the State where both Ohio Bell and Ohio State stations were in [fol. 1821] use in the same premises, were there not?

A. Yes, sir.

Q. And after unification the Ohio State connection of course was taken out, wasn't it?

A. Yes, sir, and the drop——

Q. What was done with the drop wires in those cases?

A. Written off of the books and taken off in the deduction subsequent to the inventory.

Q. And you are sure that none of those exist in this number of drop wires?

A. No, they were taken off in the records.

Q. Upon what information or upon what basis were they taken off; were reports made?

A. Yes, sir.

Q. Of retirements?

A. Yes, sir.

Q. Along with that, I assume that station apparatus upon which the Ohio State's subscribers operated were also taken out?

A. Yes, they were written off the records too.

Q. At the same time?

A. Well, I could not tell you whether it was exactly the same time or not.

Q. Now your total number of drops as you have given it in this inventory includes the drops where telephones are in use as well as those where they are not in use, does it not?

A. Yes, sir, they incoude the total number of drops taken as of the time of the inventory.

Q. And that is irrespective of whether or not there is apparatus connected with the drop in the house where the drop is attached?

A. Irrespective of whether it was connected at that par- [fol. 1822] ticular time, yes, sir.

Q. Do you have any idea how many of these drops are not connected with station apparatus in the houses to which they are attached?

A. I do not, Mr. McConnaughey, at the present time.

Q. How does the number of drops compare with the number of stations in use in the system?

A. 70 per cent.

Q. About 70 per cent; of course the number of stations includes a great many cases where there are no drops fastened on, so that that would be no basis for determining the number of drops actually in use?

A. No, it would not.

Q. On page 8 of Volume 2 of your inventory you have listed block wires by quantities, 16,616; what are block wires—interior block wires?

A. They are the wires that run along a building in the interior of a block, that is the drop or cable connection may come to the building and then follow along a building, being attached to the building in the shape of wires, twisted pair wire generally.

Q. Well, the drop is the connection between the pole and the house; the block wire carries that further into or along the house to the point where it enters the house; is that it?

A. Yes, and that block wire may come either from a drop or it may come from a terminal box; that is, it may come as cable to the building and then——

Q. Well, that would be the case where it was a building occupied by a number of people where there were a number [fol. 1823] of different stations?

A. Yes, sir.

Q. Well, these block wires are listed—each block wire, as a unit; what is the material and what is the size of those block wires?

A. Do you mean the length and guage and kind of wire?

Q. Yes.

A. I haven't that information here, Mr. McConnaughey.

Q. Well, in order to put a value on those block wires it would be necessary to know something about the length and the guage and the material, would it not?

A. Oh, yes.

Q. The quantity is the number of individual wires, as I understand it, and has no reference to the length or anything of that sort?

A. No, it has no reference to the length.

Q. Well, what about the block wires in the case of disconnected service; are they also left as are the drop wires?

A. Yes, they are usually left.

Q. Handled just exactly as the drop wires are?

A. I don't know whether they are or not; they are usually

left, but as to whether they are written off of the books or not I cannot tell you that positively.

Q. You will give us the basis upon which these interior block wires are estimated for the purpose of your valuation, will you?

A. Yes, sir.

Q. On page 30 there is a list of telegraph order tables; what is that?

A. That is a form of P. B. X. generally used by telegraph companies or department stores.

[fol. 1824] Q. How is it used?

A. For connection with different departments.

Q. Well, what does a telegraph order table consist of?

A. It consists of a table with various connections for the different departments; wires running to the different departments over the store or in the telegraph office.

Q. What does a telegraph office have to do with it?

A. Why, they simply make connection with their various departments the same as a department store.

Q. Does this page 30, under "Akron, Western Union Telegrapg Company," does that indicate that the Western Union Telegraph Company uses this table in Akron?

A. Oh, yes.

Q. I see.

A. There are two special types of order tables there at the Western Union Telegraph Company there in Akron.

Q. I get you. What are the special order tables listed on page 31?

A. Well, they are a good bit the same sort of a piece of apparatus for connection with different departments. I spoke at the beginning of the use of these order tables in telegraph offices and department stores.

Q. It is another form of private branch exchange, is it?

A. Yes, sir. We have those listed as between the specials and between the telegraph order tables.

Q. On page 140 of Volume 2 you begin a list of omissions which extends over, including a part of page 146. I understand from the phraseology of the inventory that that is [fol. 1825] here intended to be illustrative of the sort of omissions that can or have been discovered in checking inventories; is that correct?

A. A list of the omissions which from our experience we feel are liable to take place and a specific list of omis-

sions following which actually did take place and which we were able to identify.

Q. Those which you have listed as having actually taken place and having actually been identified I assume have been corrected?

A. The most of them have not that I am able to recall, Mr. McConnaughey.

Q. Why not?

A. Because they were discovered after the inventories were taken and summarized and submitted in evidence.

Q. Do you mean after this inventory that has been filed in this case was made, or after the basic inventories from which this was made up were made?

A. After the basic inventories were made.

Q. And you have not taken the trouble of correcting the errors which you discovered in this inventory?

A. Not on those that I can identify, no.

Q. I think I asked you a similar question with reference to your testimony once before in the Dayton case, and I asked you if you did not leave it out because it was more profitable to put it in on a two per cent basis, and you answered that that might be the case. Will you still answer it that way?

A. I do not recall the question and answer in regard to omissions. I remember the question in regard to contingencies. I think that you are confusing those two items, [fol. 1826] Mr. McConnaughey.

Q. In the Dayton case you included omissions and contingenices in one item, did you not?

A. At four per cent, yes, sir.

Q. You have omitted contingencies in this inventory?

A. That is correct.

Q. You have not included it in any other item, have you?

A. No, sir.

Q. Does that mean that you are not claiming any allowance for contingencies in this inventory?

A. We are not claiming any allowance whatever for contingencies.

Q. And you have divided the four per cent, which you have heretofore claimed in some cases for contingencies and omissions, and made it two per cent for omissions alone?

A. Yes, sir. Now just as a little further explanation on that point, if you will recollect, in the Dayton case, along with what you have just said, I testified that I allowed four per cent for contingencies and omissions and that I subtracted the amount that I felt was due to contingencies from my labor costs and then added it in later, as you said, in the percentage. Now in this case, or in the case as it will come up, I will not subtract anything from labor as we find it for contingencies, and neither will I add any per cent later. You get off at the same place exactly.

Q. Then you have not actually changed your set-up in that respect at all?

A. Not the net effect of it, no.

[fol. 1827] Q. Well, that is what I mean. On page 140, under the head of "Land. Typical items of frequently omitted plant," you include the "Removal of previously existing structures," an item often overlooked; do you usually include in cost of land as you appraise it the cost of removing previously existing structures?

A. We have not included such an item heretofore, but I am rather inclined to believe that we would be justified in including such an item, for the reason that nearly all of the land that we buy has on it some building, and that in addition to the cost of the land itself we are put to the cost of removing that building which we cannot use.

Q. Well, that is what that item is intended to refer to?

A. That is right.

Q. And would you consider that all such items as that would be included within the two per cent? You don't say anything about two per cent, do you; but that you think you ought to have for this item?

A. Yes, sir.

Q. You speak in that same connection, on page 140, Item 3, under "Land" of "Sewer assessments" as an item frequently omitted from the value of land; why do you mention sewer assessments?

A. Because a piece of land is more valuable when it has sewer facilities, just the same as it is more valuable when it has paving in front of it.

Q. Why not include paving assessments as well as sewer assessments?

A. Because the paving is usually taken into consideration by the Real Estate Board because it can be seen when they make the appraisal. There are lots of times when a [fol. 1828] sewer connection is not evident.

Q. Well, as a matter of fact, when you buy property that has those facilities that enters into the cost price, does it not?

A. As an original proposition, yes.

Q. And if you put it in after you buy it, of course it is paid for by you and appears on your records in that way?

A. As an original cost proposition, yes, but as a reproduction cost there are times that we often have not got a sewer connection; for instance, on a vacant lot that we buy; but if we are reproducing the lot, part of the cost would be the cost of a sewer that may run along the front of that lot, and to which that lot may have access in the way of sewer connection.

Q. You do not think that the Real Estate Board that usually makes your appraisals overlooks the fact that the property that they are appraising is in a district that has sewer connection, do you?

A. They might overlook it and they might not know just what kind of a sewer wad there. Maybe they would not take the trouble to find out, and possibly they would not even consider that.

Chairman Marshall: I think at this time we will recess until tomorrow morning at ten o'clock.

And thereupon the further hearing of this cause was adjourned until Wednesday, March 11th, 1925, at ten o'clock A. M.

[fol. 1829] Morning Session

Wednesday, March 11th, 1925.

And also George B. Williams, resuming the stand for further cross-examination, having been heretofore duly sworn, continued his testimony as follows:

Cross-examined.

By Mr. McConnaughey:

The Witness: Before we start in this morning I would like to make two corrections in my testimony given yesterday.

Mr. Schneider called my attention to the fact that I had stated that a quad was four pairs. I was talking about quads and pairs. Of course it is four wires, two pairs.

Also in connection with my testimony in regard to the joint cable and joint conduits; now it was originally my intention to set up this joint cable and joint conduit on the basis of the proportion owned by The Ohio Bell Telephone Company, as I testified yesterday. After considering that and taking into consideration that our plant records are kept on the basis of total quantities and then the percentages shown, and also that our map records are kept on the same basis, that is showing total quantities, the quantities placed in the inventory were put in to correspond with the records; [fol. 1830] that is, on the basis of total quantities rather than the percentage owned by The Ohio Bell Telephone Company. That means that the quantities where there is joint ownership is the total quantity, and to obtain the Ohio Bell Telephone Company's proportion the percentage set opposite The Ohio Bell Telephone Company should be applied to the total quantity.

Take, for instance, page 139, Volume No. 1, the first item is 7 Duct Multiple Tile Conduit; The Ohio Bell Telephone Company ownership 85.37 per cent; A. T. & T. Company ownership 14.63 per cent. Trench feet, 223.7 feet.

Now that means that to obtain The Ohio Bell Telephone Company's proportion it is necessary to take 85.37 per cent of 223.7 feet.

One other thing in further answer to Mr. McConnaughey's question of yesterday; he asked what the use of stop watches and pocket watches was listed under the other equipment of central office. The use of those watches is to time the answering time of calls and check up on the answering time of operators.

Q. Do you think those are all of the mistakes that you made yesterday, Mr. Williams?

A. Well, the first two are mistakes. The second was not.

Mr. McConnaughey: All right. That is all.

[fol. 1831] Cross-examination.

By Mr. Dotson:

Q. The property, the ownership of which you have proved in the manner described, is that a joint ownership?

A. It is.

Q. And is that based upon the original cost of construction?

A. I told you yesterday I think that it might be through the original cost or the use, and that I would furnish contracts covering that.

Q. I see.

A. And in that connection, I have started to work not only on that item but all the rest of the information that I said I would furnish.

Q. Well, is it your belief that there will be any case where there would be a separation of, or rather an omission of either one or the other element, that is the element of cost and the joint ownership basis, entirely upon use, or vice versa?

A. It might be either; I don't recollect at the present time. The contracts themselves will show that.

Q. Well, if it should be based entirely upon use instead of cost, how could the ownership be acquired on that basis?

A. Why, it would be an agreement contained in the contract; I think that would have to govern.

Mr. Dotson: That is all.

[fol. 1832] Recross-examination.

By Mr. McConnaughey:

Q. Now, Mr. Williams, you have stated in your direct examination, on page 47 of the record; "My understanding is that the order of the Commission provided that we set up this inventory in accordance with the Uniform System of Accounts and we have followed these definitions to the best of our ability." That is the definitions of the Uniform System of Accounts. I call your attention to the provisions of the Uniform System of Accounts, a copy of which has been introduced in this case, on page 42, under Account 260: "General Equipment. This account should include the cost of the equipment classified in the subaccounts hereunder. Items of small value or short life, such as portable tools liable to be lost or stolen, temporary shelving, waste baskets, gloves, whips, and the like, should not be included in this account or the subaccounts hereunder but should be charged direct to the operating expense accounts or to the clearing accounts." I will ask you whether the practice of the Com-

pany is to follow that provision of The Uniform System of accounts with reference to taking care of portable tools and perishable items of that kind?

A. Are you speaking now from the standpoint of bookkeeping or inventory?

Q. Well, from the standpoint of bookkeeping for the present?

A. It is, yes, sir.

Q. How, then, do you justify putting into an inventory [fol. 1833] items of small tools which you have listed some 15 or 20 pages of in your inventory, if they have already been charged to expense and purchased in that way, and that is done as a matter of regular practice, and you expect to do it in the future, I assume?

A. On the reproduction theory of reproducing the property, and the reason for that is that if we are reproducing the property now you have no expense account to charge anything to; you have to charge it all to capital.

Q. Notwithstanding the fact that in the return which is allowed in any rate as fixed by the Commission such items as this are allowed for in the expense accounts?

A. To take care of the future after the property is established. But in the establishment of the property you have to charge it all to capital.

Q. The fact is, however, that all small tools that the Company has that are included in this inventory have been purchased at the expense of its subscribers through the allowance of expense accounts in the fixing of rates?

A. They were handled in accordance with the I. C. C. accounting.

Q. And if that is the effect of that method of handling, that is true, is it?

A. As far as that effect goes, yes.

Q. Does this inventory that you have filed here contain all of the property in the system whether in use or not for telephone purposes?

A. That was my intention to put that in and to identify [fol. 1834] what was not used and what was to be disposed of.

Q. You have not in this inventory identified any items excepting real estate or buildings as not being in use for telephone purposes, have you?

A. No. I consider that the balance of it was in use.

Q. All of the personal property of every kind you consider in use?

A. Yes, sir.

Q. Have you taken any account of such circumstances as that of crossarms on poles where there are several crossarms, only one of which is used for the suspension of wires, and there are several that have nothing attached to them at all? Do you count them among the crossarms that you have listed here to the number of over 300,000 as a part of the telephone plant?

A. I do not know of any condition where there are several that are not in use on the same pole. There may be one or two and in that case I considered that a normal surplus which the Company would use and are entitled to.

Q. Isn't it a fact that in those instances the crossarm is usually omitted because of the fact that by applying cables to the plant you have abandoned the use of those cross-arms and have not yet taken them down?

A. That condition might be to a very limited extent and of course, as I stated yesterday, it is offset in my mind by the construction work in progress.

Q. Well, how is it offset by construction work in progress?

A. Because you have in the first instance plant that the use may have been discontinued either temporarily or per- [fol. 1835] manently. Now if it is temporary, it will go back in; if it is permanently, it will go out. In the construction work in progress you have plant for which an expenditure has been made and which may be partly constructed, but which under our accounting has not yet been taken in. That is the case where if we would eliminate that which is there at the time but will be taken out I think we should also take into consideration that which is there and which will later be put in.

Q. This inventory includes then nothing of work in process of construction?

A. No; there is an item mentioned here "Construction work in progress", but there is nothing set up for it.

Q. Where is that mentioned? I overlooked that, I guess.

A. On page 159, of Volume No. 2, and I have stated on that page "The amount of money represented by such work will be available as of such date as the Commission may name". I have not included any specific amount of money or items. And in that connection I would like to state that

I have withdrawn from the inventory any and all items of plant that have gone into our plant accounts but which is still represented by construction work in progress so that the inventory as it is set up does not include any construction work in progress.

Q. But you think that you are justified in leaving in the inventory all items that may be found there of plant the use of which has been discontinued as an offset against your omission of the work in progress?

[fol. 1836] A. Not only for that reason but also for the reason that, as I stated, a considerable amount of that plant —a considerable proportion of it, although I do not believe the total is very large, will probably be used again.

Q. Now we are speaking particularly—we were speaking particularly of cross-arms. Is the practice of the Company at the present time, and would it be the practice of the Company if it were reproducing this plant, to put up poles with surplus cross-arms, more than you expected to use immediately?

A. That might happen, yes, sir.

Q. Well, would it happen? Would you expect that to happen as the usual thing?

A. Why, it is my understanding that we put on crossarms —possibly one, or certainly a part of one, in excess of our immediate needs, the same as we put up cable with surplus pairs in it, or conduit with surplus ducts.

Q. Now according to your system of keeping your plant record and making up this inventory then, a crossarm, as long as it existed on a pole, would be counted as a crossarm to be valued in this case, would it?

A. Not necessarily, no, sir, Mr. McConnaughey; it would depend upon the plans of the Company in regard to that crossarm and the condition of the crossarm.

Q. Well, do you mean to say that you have taken into account in making up this inventory plans of the Company with reference to each particular crossarm in the whole system?

A. No.

Q. And have eliminated all those that the plans of the [fol. 1837] Company indicate will not be used again?

A. No; but in the reporting of the additions and deductions since the inventory dates, the plans of the Company of course had to be considered in that reporting, whether

it is the intention to use a particular crossarm again or not.

Q. If a crossarm is not to be used again in that location, so far as the plans of the Company go, is it the custom to take it down and put it in storage?

A. Either to take it down and put it in storage or to take it down and destroy it.

Q. According to the condition of the crossarm?

A. Yes, sir.

Q. Wherever a crossarm is hung in place for any length of time it would indicate that it is kept there for future use in that location?

A. If it is any considerable length of time.

Q. The practice of the Company is along that line?

A. Yes, sir.

Q. Now what do you contemplate as work in process of construction in your plant records and in your inventory; that is, how do you determine what is to be put in that class and not in the class of property in use?

A. Our estimate routine covers that, Mr. McConnaughey, and generally speaking the division is on this basis; that property until it is ready for use is considered as construction work in progress.

Q. And when it is completed and ready for service the work report shows that fact and it is put into the plant account?

[fol. 1838] A. It is charged into the plant account, yes, sir.

Q. Well, now, is there any difference in the practice of the Company with reference to the abandonment of crossarms as between exchange crossarms and toll crossarms?

A. Not to my knowledge there is not, no, sir.

Q. To what do you apply the term "work in progress"? How does that affect the rebuilding or reconstruction of existing plant when you do work of that kind? Suppose you are tearing out central office equipment in Dayton and replacing it with new; how is the plant account affected by that situation; how does the routine work in reference to it?

A. Why, the routine on that would provide that as the plant was taken out it would be written out of the accounts. Then on the other side, as the new plant went in it would be written into the accounts.

Q. And in that sort of a situation what appears in the inventory would be what appeared on the plant record, would it?

A. The completed plant only; that is all that is in the inventory.

Q. Of course in a situation like that, where you actually were in the act of replacing old equipment with new, you would not think of reproducing the property that you actually put into this inventory, would you?

A. What would happen in that case, Mr. McConnaughey, would be that we would very likely take the old plant as it was before the change was made, because the retiring of that then would come along later and take care of taking out that old plant and substituting the new plant for it.

[fol. 1839] Q. And your inventory would be on the basis of the old plant?

A. Yes, sir.

Q. In a situation of that kind?

A. Yes, sir.

Q. How do you handle small items of changes in the plant, additions in the plant, say where you add one or two poles for the purpose of taking care of a new subscriber at the end of a line?

A. They are handled on job orders.

Q. And how do they come into the plant account?

A. The same way, through construction work in progress.

Q. Just the same as if it were a big job of a complete installation of a new exchange, it would come into the plant account in the same way, would it?

A. That is my recollection—pardon me—it would not make any difference in that end, whether it passed through the construction work in progress account or not, because if it went direct to the plant account it would not go in until it was completed and ready for use.

Q. Does this inventory include any dead poles to which there are no wires attached, cables or any other means of telephonic communication?

A. Not to the best of my knowledge and belief; those were eliminated when the field inventories were taken.

Q. In the Canton case a map was filed showing the location of—presumably, according to your testimony, as I understand it—the location of all the poles that were listed in your inventory?

A. Yes.

Q. That list included a number of dead poles; in that

instance at least your inventory did include some dead poles [fol. 1840] as I am informed?

A. That is a statement that you are making, and I would want to check up in that. It is my recollection that point was not definitely settled; at least it was not admitted, if I remember correctly, by the Company.

Mr. Burr: It is my recollection, Mr. McConnaughey, that Mr. Brownell called attention to some poles that he had found from inspection to be not in use at the time of his inspection, and his inspection, however, was made long after our inventory was filed, and those poles had been in use at the time the inventory was filed. They had been discontinued at the time of Mr. Brownell's inspection and the poles had been taken out in the net additions which were shown in the subsequent testimony. That is my recollection of the record.

The Witness: That is my recollection also.

Mr. Burr: Because I remember taking Mr. Brownell to task for not having made allowance for the fact that his inspection was made long after the inventory was made.

By Mr. McConnaughey:

Q. Now referring to the Akron case, the map, the pole maps filed in that case showed a certain number of poles marked "Dead" by you. I will ask you whether or not those dead poles are included in this inventory if they were included in the Akron inventory?

A. Not to the best of my knowledge and belief, and if they were included in there it was on the basis of information obtained to the effect that they would be re-used.

Q. It is your purpose, at any rate, not to include in this [fol. 1841] inventory any property that is not actually in use?

A. Or that I know will not be used; absolutely.

Q. Well, now, when you say that, do you mean to say that you do not carry any of this property, the use of which is discontinued in a given location, as a part of your supplies for future use in some other location?

A. No, they are not carried in supplies unless they are actually taken down and the plant credited and supplies charged.

Q. Well, that does happen sometimes with reference to this outside plant, does it?

A. Oh, yes.

Q. And in that event the item would be transferred in the inventory from used property to your materials and supplies account?

A. Through our regular accounting, yes, sir.

Q. And in that event it would appear in the inventory but in another place?

A. It would not appear specifically in the inventory for this reason, that the accounting deducted it from the field inventory and I have not set up an inventory of materials and supplies. Of course theoretically it should appear in there and actually is in there and should be accounted for on whatever basis an allowance is made for working capital and supplies.

Q. You do not include that as an itemized inventory but cover it on a percentage overhead basis?

A. That is right.

Q. Now on this queston of joint ownership of poles, Mr. Williams, I understand that—as I recall your testimony—[fol. 1842] that in all cases where there is a joint ownership of poles you have as a basis for what you show in reference to that a contract or the evidence of some employe of the Company who knows of the fact as to its installation and use?

A. Yes, sir.

Q. You have only indicated, as I recall this inventory, joint ownership with the A. T. & T. Company on poles; is that correct?

A. I don't think I have indicated the joint ownership with anybody on poles.

Q. Well, that is correct.

A. I have on cable and conduit.

Q. You have only indicated the joint ownership by your method of calculating the poles, haven't you?

A. Yes, we have our data back of every bit of that in the office.

Q. You use poles jointly with all sorts of pole using utilities, power and light companies and traction companies?

A. Yes, sir.

Q. And in all cases where you make that sort of use you have a contract or something of that kind back of it?

A. Either that or the information which you speak of.

Q. Have you a contract with reference to your joint use of poles with the Dayton Power & Light Company?

A. We have an agreement.

Q. Not a signed contract between the officers of the Company?

A. No, sir.

Q. You have an agreement as to the fact of ownership or joint ownership; is that what you mean?

[fol. 1843] A. Yes, sir.

Q. How about The Columbus, Railway, Power & Light Company in Columbus, have you a written agreement with them?

A. We have quite a number of agreements with them covering the big majority of all of the poles that are jointly used.

Q. And with reference to those that are not covered by the agreements, how do you cover that?

A. Information received from the plant people.

Q. And have you an agreement with The Northern Ohio Traction & Light Company at Akron?

A. The same situation prevails there.

Q. You have a signed agreement with them?

A. That is on everything—but we have on a large number.

Q. You say "the same condition"; do you mean the same condition as exists in Dayton or the same condition as exists in Columbus?

A. As in Columbus.

Q. How do you stand with the Illuminating Company of Cleveland?

A. We have an agreement on all poles jointly used.

Q. A signed agreement?

A. It is my recollection that signed agreements cover everything there. We also have an agreement on everything in Youngstown.

Q. How about Toledo?

A. The situation there, according to my recollection, is the same as it is in Columbus; it is not entirely covered.

Q. Well, do these agreements settle the question of ownership or the question of joint use?

A. Ownership.

[fol. 1844] Q. Are they the same in all cases; that is, do they determine that one company owns a part of each pole

or that you divide the poles between you, and one company owns one pole and one the other, or how is that worked out?

A. The condition is different in regard to specific poles but it indicates on all poles that are jointly used whether those poles belong wholly to one or the other companies, or whether there is a joint ownership; the matter of ownership though is definitely settled either as whole ownership or joint ownership.

Q. How have you handled the question in your inventory of a situation where you do not own the pole according to one of these agreements but have the right to use it?

A. We do not consider that as ownership at all; it is not included in the inventory.

Q. And on the other hand, another pole which you own and which some other company uses, you do count that pole and they would not be expected to count it as theirs?

A. That is right; we place it entirely on the basis of ownership and not on the basis of use or rights to use.

Q. Then there is not included in this inventory any pole as to which you only have the right of contact?

A. No, sir.

Q. Are these agreements all uniform in their agreements or have they been worked out as a separate matter in each community and with each company?

A. Oh, they are not all uniform, no.

Q. In connection with the taking of inventories in the [fol. 1845] field you have mentioned the way in which disputes between two men on the ground have been settled; that is, where they differed as to whether the wire was copper or copper clad, they would climb the pole and determine by scratching the wire or otherwise determining it; now is it possible—are those the only instances where the men would actually make that sort of an inspection?

A. Oh, no.

Q. That is where a controversy arose as to what kind of material was on the pole?

A. Well, if there was any question in either one of the men's minds as to what the wire was——

Q. And since it is not possible to certainly determine by looking up from the ground, it might very often happen that no question would arise in the minds of either one when actually both of them might be mistaken?

A. Considering the experience of the men taking inventories the percentage of errors due to that cause in my judgment would be very small.

Q. They would be as likely to err on the side of more expensive wire as on the side of the less expensive wire, would they; so that if there were errors they would offset each other?

A. That would be my judgment on it, yes.

Q. You have not, however, any experience to really base any judgment on in that respect, have you—instances of actual errors that you could trace to that cause?

A. I don't recall any now, Mr. McConnaughey.

Q. But it is not always possible to determine from the [fol. 1846] ground what class of wire is actually in use on the pole, is it?

A. No, it is not, and when there is any question in the men's minds they are provided with micrometers and instructed to climb the poles and measure the wire.

Q. That is the way they would determine what the material was, by measuring it?

A. No, they would determine the guage of it; they can usually tell the difference between copper and iron wire from the ground by the way it is tied into the insulators.

Mr. Burr: Does the splicing help to determine that fact?

The Witness: I do not recollect whether splicing does or not; I know tying does.

By Mr. McConnaughey:

Q. What id the difference? How do you tell the difference between copper and copper clad wire?

A. By scraping the copper off and getting down to the steel.

K. That is the only way you can tell the difference?

A. Unless you have a record on it as to the installation. We had a case of that kind in Tuscarawas County that we made a mistake on and the mistake was corrected on that afterwards.

Q. Then it is easily possible to mistake copper for copper clad wire?

A. That mistake might be easily made if there were very much copper clad wire—open wire, but there is not.

Q. Is there any material difference in the cost of the two? Which is the more expensive?

A. At the present time I could not tell you without refer-
[fol. 1847] ring to our records.

Q. There is a difference though?

A. Yes, there is a difference, but which is the higher I could not tell you now.

Q. Now a question or two about rights of way, Mr. Williams; you have not attempted to list any right of way property that the Company holds by deed or anything of that sort, have you?

A. No, I have not.

Q. The Company does have some private right of way that it holds by deed, I suppose?

A. Deed or agreement or grant of some kind.

Q. But you have not seen *fit* to list any of those items here?

A. No, because I doubt whether I could find all of those.

Q. You count in right of way the right to set poles in streets and public highways or wherever they are set, as I understand it?

A. Yes, on the theory that if we were reproducing the property, in my judgment it would be necessary to obtain those rights from somebody, either the City or the property owner or somebody else.

Q. You have made no attempt to determine the cost of actually securing the rights of way you are now using? You work that out entirely on the basis of percentage of the cost of it?

A. That is ahead of the inventory, Mr. McConnaughey. I would rather not commit myself at the present time on that.

Q. I thought you had already committed yourself; let us
[fol. 1848] see if you haven't; where is your right of way, do you remember?

A. It is on pages 198 and 199 of Volume No. 1. I don't think you will find any place where I have committed myself on that.

Q. You have merely listed here the various items that you think should be taken into consideration in finding out in some way not yet to be disclosed what the value of your right of way is?

A. Yes, sir, and I have mentioned in the last item on page 199 some of the items which in my judgment it would be necessary to obtain right of way for.

Q. How much—what proportion of the poles were set on private right of way? I think you have stated about one-tenth in your direct testimony, have you not?

A. A little in excess of one-tenth is my recollection.

Q. Well, now, is that the percentage over the whole property?

A. Yes, sir, that is the average percentage.

Q. The average percentage over the whole property; there is more on private right of way in some places than there is on others?

A. Oh, yes.

Q. And where do you have the most on private right of way?

A. The two locations that occur to me now are in the larger cities, especially those cities where there are no alleys, subdivisions where there are no alleys and on toll pole lines, particularly in Eastern Ohio, where the pole lines do not so generally follow the route of roads as they do in a level country.

[fol. 1849] Q. You cut across country down in that district to save mileage, do you?

A. Up hill and down generally in a pretty straight line, not only to save mileage but also to save the expensive guying and gracing that you have on those roads that twist and turn.

Q. Well, now, what is the experience of the Company with reference to the cost of securing rights in those hilly districts in the southeastern part of the State; do you usually have to pay something for the right to cross private land?

A. Oh, yes.

Q. How much?

A. I could not tell you that now and I think that is getting into the cost a little now, Mr. McConnaughey.

Q. Do you buy the fee of the land that you cross, as a rule, or simply the right to cross?

A. We have experienced both conditions.

Q. What percentage of poles in the City of Dayton are set on private right of way?

A. I could not tell you that, Mr. McConnaughey.

Q. Well, now, Mr. Williams, if it were desired to check your inventory in order to determine whether or not the number of poles, say of a particular class, actually existed

in your system, how would we be able to do that from anything that is filed in this inventory?

A. There are two ways that occur to me, Mr. McConnaughey. One of them is to consider the fact that, as I stated in my direct testimony, a check has already been made by the Commission, and in some instances by the [fol. 1850] cities, in probably 50 per cent of the field inventories that go to make up this June 30th, 1924, inventory, to satisfy yourselves that the same inventories that the Commission checked and you checked are incorporated into this inventory, which can be done and which we will be glad to show. Then to check the additions and deductions, which are a matter of record, to those inventories that have been field-checked, and also to consider the field inventories which we have made on all of the rest of the property, but which has not been checked either by the Commission or by the City; we have detailed field inventories on every one of them; and to check the inclusion of those into this inventory and the additions, which are a matter of record. Now that is one way.

Q. As I understand it, that would require that we go over the entire property; I mean the records in your office with reference to the entire property in order to determine that fact; is that correct?

A. If you considered it necessary to do that. Now the thought I have in mind in connection with that is this, that you might possibly be able to satisfy yourselves by checking those inventories that have been presented here before the Commission and that the Commission has checked and that the Cities have checked and then to select any other inventories that you want, for which we can show you the detailed field inventories, and check the inclusion of all of that into these, without making a check of the entire thing.

Mr. Burr: What do you mean by the word "these"?
The Witness: Into this June 30th, 1924, inventory.

[fol. 1851] By Mr. McConnaughey:

Q. But you have not filed anything in this case up to the present time by which it would be possible for anybody that was interested to, say, spot check any part of your inventory to determine whether it was correct without going through

the whole property, have you—on the ground, I mean, in the field?

A. That is, to spot check in the field as of June 30th, 1924?

Q. Yes, or any time; of course this is as of June 30th, 1924, and we would have to take into account the additions and deductions; I understand that. But you have not attempted to locate the property—the outside plant, excepting the real estate and the buildings and the central office equipment in any of these inventories, have you?

A. No; not in the inventory filed; of course we have records indicating the plant either as of June 30th or some prior date that we have not—for which records have not been brought up to June 30th, 1924, and it would be possible to select any locality that you wanted and to check the property in that locality and then check the inclusion of that property into this June 30th, 1924, inventory.

Q. But you could not determine whether that was included in this inventory or not without counting all the other property, could you?

A. Yes, you can, because we can show as of June 30th, 1924, the record or the number of the property in any exchange which is included in this June 30th, 1924, inventory; so that if you check in the field some particular locality and [fol. 1852] arrive at your quantities you can check that with what is included for June 30th, 1924, in this inventory.

Q. But in this inventory that you have filed there isn't anything included for any particular exchange; it is all lumped in one sum?

A. No, but we have the record back of that.

Q. But now the record in your office shows that the amount of property of every class that is located in each one of the exchange areas, which altogether make up your total, the total territory covered by this inventory; is that correct?

A. Yes, sir.

Q. And that property is carried in such way as to distinguish between toll property and exchange property, is it?

A. With the exception of central office equipment; the I. C. C. accounting does not require a separation between toll and exchange on central office equipment. Now pardon me; that also applies to the general equipment accounts; there is no separation of course between toll and exchange in those.

Q. And you also have in your office, I assume, maps which locate practically all of the outside plant?

A. They are not all in my office. They are in the plant department and they are obtainable. As I said, I think those maps may be up to June 30, 1924. They may have been brought up to a little later date or they may, through the volume of work which has been carried on, not yet have been brought up to June 30th, 1924, but they are as of that date or some date prior.

[fol. 1853] Q. Well, they constitute the working records of the Company with reference to these matters and would speak as of one date or another, according to the amount of work that had been done on them at a given time; that is correct, is it?

A. That is right.

Q. And would represent the property subsequent as it appears in this inventory that you have filed?

A. Yes.

Q. There would be some possible additions and deductions based upon the fact that they might speak as of a different time?

A. Yes, sir.

Mr. Burr: But you can show those additions and deductions?

The Witness: Yes, sir.

By Mr. McConnaughey:

Q. You could not test the correctness of the entire inventory by a spot check of the amount, of the number of poles, for instance, in one community without determining in addition to the number of poles in that particular community whether or not the total of all the poles shown by the record that you would show to us in your office was the same as you show in this inventory that you have filed?

A. If I get your question correctly——

Q. I want you to tell us how we can spot check your inventory and check it up with what you have filed here. I don't care how you would do it, but I would like to have you explain how we would do it?

A. Well, you can check—for instance, if you are checking [fol. 1854] on poles, the poles in Toledo, now then you can compare those poles that you actually find in the field as of

June 30th, 1924, with just what I have included in this inventory for Toledo, and find out whether it is right or not.

Q. But you have not shown anything in Toledo in this inventory?

A. No.

Q. You have shown a lump number of poles?

A. But I have the records back of this inventory to make that up.

Q. Well, then in addition to the number of poles that you show in Toledo by this supporting data, there is a certain number of other poles that make up the total?

A. That is in other exchanges.

Q. Now how are we to satisfy ourselves that between the total in Toledo and the gross total there have not been some lost that have not been accounted for?

A. You can compare what you found in Toledo with what I have included in here for Toledo; that will give you a check on Toledo. Beyond that you can do two things; you can pick other exchanges, that is, spot check exchanges, and satisfy yourself that because a certain number of exchanges are correct that the whole thing is correct; or you can check the whole thing. That is the only two ways you can do it.

Q. And that we would have to do by going back to the records of the Company, and we could not do that by anything that is in evidence in this case.

A. Oh, you would have to have additional records beyond this, yes.

Mr. McConnaughey: I think that is all I care to ask Mr. [fol. 1855] Williams at this time.

Cross-examination.

By Mr. Hagelbarger:

Q. Can you furnish the record of poles for Akron as of a certain date—the Akron Exchange?

A. I can furnish a record on that, Mr. Hagelbarger, but before I commit myself that I will, don't you think it would be the better proposition for you gentlemen to decide on just what exchanges you want, or what your plan will be, so that I won't have to do any more work in that connection than I can help? In other words, I will be glad to furnish anything that I can that will line up with your general plan.

Q. Well, is it such a difficult piece of work to furnish the number of poles for Akron?

A. It may be as of June 30th.

Q. Well what date could you furnish it as of?

A. I could not tell you that.

Mr. Burr: You mean you cannot tell him now?

By Mr. Hagelbarger:

Q. By checking up you might be able to find out it is quite convenient to furnish it as of some date?

A. Yes, sir.

Q. Will you let me know then whether or not it is reasonably convenient for you to furnish the number for Akron as of a certain date?

A. I will.

[fol. 1856] Recross-examination.

By Mr. Dotson:

Q. As I understand it, Mr. Williams, the inventory in evidence is really based upon the inventory of the various exchange areas of the State as of June 30th, 1924?

A. Yes, sir.

Q. And then how does it come that you used June 30th, 1924?

A. Because that was the latest date to which we could conveniently bring the inventory in time to comply with the Commission's order for filing December 1st, 1924.

Q. As a matter of fact, it would be more convenient for you to furnish any data such as Mr. Hagelbarger asks for Akron as of that date than any other date, wouldn't it?

A. Not necessarily, for the reason that, as I told Mr. McConnaughey, the records in the different exchanges are not kept all up to the same date, for the reason of the varying forces at the command of the plant and engineering people, and the varying amounts of work, plant put in and taken out, and one exchange may have its records up to June 30th and another one may be back of that and another one may be almost up to the minute; that is, as of the present time.

Q. Well, my inquiry has been based upon the assumption of the Company having adopted June 30th, 1924, as the basic date for this inventory, and this inventory being based upon

the condition of the plant in the various exchange areas as [fol. 1857] of that date that the Company had brought up the inventory in all of those exchange areas to that date?

A. Oh, the inventory—the quantities, yes, sir, that is true; we can furnish the quantities in any exchange as of June 30th, 1924.

Q. And the classification of the property?

A. Yes, sir.

Mr. Dotson: That is all.

Recross-examination.

By Mr. Hagelbarger:

—. What was it you thought you could not furnish as of June 30th, 1924, in regard to poles?

A. The map records.

Q. Map records?

A. Yes, sir.

Cross-examination.

By Mr. Laylin:

Q. Mr. Williams, I believe you state that the inventory in regard to the Columbus area was based on the inventory of the Bell property as of 1918 and the Ohio State property as of 1919?

A. That was my recollection, yes, sir.

Q. So that this present inventory includes all of the property of both former companies, is that correct, as it stands now?

A. Yes, sir.

Q. As of June 30th, 1924?

A. That is right.

[fol. 1858] Mr. Burr: You are taking into consideration the construction since the dates of those inventories?

The Witness: Oh, yes, June 30th, 1924.

By Mr. Laylin:

Q. Is it not true that the Company has completed plans for the unification of the properties in Columbus?

A. Yes, sir, which plans will make a net addition of over two million dollars to what I have already given here.

Q. That is taking into consideration your construction work in progress that you were talking about awhile ago, is it not?

A. No, sir.

Q. Well, it is taking into consideration the work planned but not yet construction work in progress?

A. The estimated figure that I gave you of two million dollars takes in all the net additions that will accrue due to the unification plan. Of course that has not gone in yet but when we go through with the unification in Columbus we will have a net addition probably in excess of two million dollars to what I have included in this inventory as of June 30th, 1924.

Q. That is the Company's present estimate?

A. Yes, sir.

Q. Does that include deductions for duplications and abandonment?

A. Anything that we consider——

Q. That is absolutely net?

A. Anything that we consider will not be used and useful will be taken out; that is the net figure.

Q. Does that contemplate the abandonment of any ex-

[fol. 1859] changes which are listed in this inventory.

A. Yes, sir.

Q. How many?

A. I could not tell you that. I have not the details of the plan; I have just the net figure. That net addition, according to mt recollection, will be in the neighborhood of two million dollars.

Q. That is taking into consideration not only the abandonment of exchanges but the duplication of pole lines and conduits and the elimination of drop wires—unnecessary connections?

A. Wherever we consider they will not be used, yes, sir.

Q. Has any additional property been included in this inventory of the Columbus property which has been installed by reason of the prospective unification?

A. There may have been some small amounts which were put in in connection with the unification but if there has been any of that inclusion it is because the plant is put in and working in service.

Q. You could not give me the details of that, could you?

A. No; it would be small; there would not be very much of that yet; that is, up to June 30th, 1924.

Q. I am not sure, Mr. Williams, that I get your interpretation of this item of construction work in progress which you were discussing with Mr. McConnaughey. I understand your routine in connection with that, but what attitude you have, or the Company has rather, with reference to that as included in this inventory is what I would like to get clear; is it the intention to incoude that as a basis of any valuation?

A. I do not know that that is definitely settled yet. We [fol. 1860] are mentioning it in the inventory.

Q. Well, that is the reason I asked, because it is mentioned.

A. But as I stated, there are no quantities in there for it yet and that will come out more clearly and more definitely when we make our appraisal.

Q. Quite so. You mentioned I believe earlier in the discussion the location of a pole yard here in Columbus; can you give us that location?

A. Why, it is in South Front Street, in connection with our plant office.

Q. Plant office?

A. Yes, sir, we have both a pole yard and a cable yard.

Q. Can you more definitely locate that on South Front Street?

A. My recollection on that now is that is a leased lot instead of an owned lot, but nevertheless we have our pole yard there.

Q. But it is not included in this inventory?

A. No, sir.

Q. Not specifically?

A. No, sir.

Q. You cannot then locate that more definitely than that it is on South Front Street?

A. That is my best definition or location that I can give you now. I can find that for you very easily.

Q. I wish you would do that, please, and give it to us. Mr. Williams, I know that you have listed in the property three properties on North Third Street, including therein the property which I understand was recently acquired from the Columbus Railway Power & Light Company. Can you give us the intention of the Company as regards that prop- [fol. 1861] erty?

A. The property I do not believe was acquired from The Columbus Railway Power & Light Company; it was acquired — another company.

Q. Well, it was formerly occupied, was it not, by the Columbus Railway, Power & Light Company?

A. Yes, sir, that is true. The present use of that building is that we are using either three or four floors entirely and we are right now actively engaged in the installation of new equipment, and the plans, according to my understanding, are to use every bit of that building.

Q. Some of it though at the present time is under lease, are they not?

A. My understanding is that the Company owns that building outright. I may be mistaken but I think not.

Q. Are there any tenants in the building?

A. No.

Q. No tenants?

A. No—pardon me, just a minute; there may be one or two small parts of that building that are still rented out, but it is very small. I know that the plans of the Company call for the entire use of it.

Q. Does the plan also call for the continued use of the other two properties on Third Street?

A. I know that it does at 33 North Third Street, the building in which my department is located. As for the other building, the plans call for the use of that building for some time in the future. How long I do not know. Whether it is the ultimate plan to use it or not I could not tell you that.

Mr. Laylin: I think that is all.

[fol. 1862] Commissioner Poor: Is that all?

Recross-examination.

By Mr. McConnaughey:

Q. Mr. Williams, if there is in this plant any excess property not actually necessary for the performance of the functions of the company as a telephone company, that is included in this inventory also, isn't it?

(No reply.)

Q. Assuming that there is, which you do not admit.

A. Yes, but not anything beyond what we consider a normal surplus.

Q. Have you made any deductions because of any particular place there was more plant provided than was necessary including a normal surplus?

A. Yes, those deductions all came out in connection with the unifications.

Q. Did you make any deductions excepting as to property which you actually took out of position and connection with your system?

A. Well, we made deductions to the extent of what our accounting reported, and our accounting reported all that we considered excess surplus.

Q. Whether it was taken out or not?

A. Yes.

Q. Do you recall that there was any underground conduit deducted from the plant because of the unification; I mean underground conduit that was not actually removed?

A. Yes. I think there was; I have a recollection of some conduit being deducted but just where it was I cannot recall [fol. 1863] now.

Q. Well, will you check that up and see if you can give us some definite information on that?

A. Yes, sir.

COLLOQUY

Mr. McConnaughey: That is all.

Commissioner Maullar: Is that all?

Chairman Marshall: Is that all with this witness?

Mr. McConnaughey: He is to give us some additional data at some future time.

Chairman Marshall: I mean at this time.

Mr. McConnaughey: Yes, sir, at this time.

Chairman Marshall: What is the status of this hearing; are you through?

Mr. McConnaughey: I think we are through with the cross-examination of Mr. Williams until he produces this additional data, and as far as Mr. Schneider is concerned it seems to me that the cross-examination of Mr. Schneider should be deferred until he has put a figure on some of the things he has testified to, if he intends to do that, or until somebody has. I think the cross-examination could all be done just as appropriately then as it could be now, he having testified to intangibles which is not a matter of inventory.

Chairman Marshall: Does Mr. Schneider expect to put in some figures?

Mr. Burr: No, he was here today for cross-examination.

Chairman Marshall: I understand, but Mr. McCon-
[fol. 1864] naughey just said——

Mr. McConnaughey: Well, whether he does or somebody else does; the question of valuation is the important thing.

Chairman Marshall: In other words, at this time you solicitors do not want to proceed with his cross-examination?

Mr. McConnaughey: That is it.

Chairman Marshall: How long do you want?

Mr. Dotson: What time have you available?

Chairman Marshall: We will send for our calendar.

Mr. McConnaughey: There is one other thing. I think there is one other thing we would like to call the Commission's attention to at this time. I believe we are all agreed in the feeling that this inventory is not a sufficient inventory to be filed in this case; that the inventory should be filed in such form as to locate the property that is incouded in it—all of it—so that it can be checked and visualized and we can know something about it on the record. I am quite sure it is going to be necessary at some time and in some way to bring into this record the amount of property located in these exchanges. That has not been done up to this time. We have no means of checking property that may be used and useful in the City of Dayton, for instance. No other community can do that from anything that is on the record. We are not in a position to go into the records of the Company except by their permission. We have no rights there. [fol. 1865] The Commission of course can. As long as we have any connection with the case and attempting to keep track of it we think we are entitled to have on the records the facts necessary to determine things as they affect our different communities and for that reason we want to ask the Commission to require that this inventory be amplified as I have indicated.

Commissioner Maullar: I understand Mr. Williams stated that they had the supporting data for this inventory in a segregated form which they would supply.

Mr. McConnaughey: He has not said, as I understand, that they would supply on the record. He said that the Commission could have access to it. We think it ought to be in the record so we or the world can have access to it.

That is consistent with the practice that has been pursued in all local cases and we feel in those cases that we are in a position to know fairly well——

Commissioner Maullar: But from that segregated data you can then pick out and high-spot to ant extent you care to.

Mr. McConnaughey: That is right. We cannot high-spot on the record as it stands now, and Mr. Williams has told us that.

Commissioner Maullar: What about that, Mr. Burr; what are we to understand?

Mr. Burr: We have any and all of the information necessary to substantiate the quantities and the other property shown in Mr. Williams' inventory. To produce here the [fol. 1866] supporting data for the whole State would require a carload of literature, would it not, Mr. Williams?

Mr. Williams: Yes, sir.

Mr. Burr: It would also involve the production here before the Commission of all of our working records. That has never been done in any case heretofore and I do not believe this Commission wants a record of this size, and I do not believe that counsel on the other side would want a record of that size. It seems to me that if there is any doubt in their minds as to any particular locality in which property is located and as to whether or not the property in that locality has been duly counted and inventoried, the request could be made upon us to have ready and available the data showing that property, and that then some responsible person could check that and report to this Commission the result of his inspection. It would be exactly the same as any engineer employed by the other side would be required to do if he were making a test of the correctness of the inventory.

Now this of course is a State-wide, or rather a Company-wide hearing, and as Mr. McConnaughey suggested in Mr. Williams' cross-examination, the mere fact that property located in some particular locality was checked would not prove the correctness of the whole, but it seems to me that if there is going to be a check of Mr. Williams' inventory, it should be a complete check, but not by producing here in this Commission all our records—working records and other records which would be necessary to show those facts.

[fol. 1867] Mr. Dotson: Well, so we can check it, Karl.

Mr. Burr: I had supposed that some engineer would be employed who might want to do that work.

Commissioner Poor: There is no secret about the matter; everybody in the room knows that this Commission has applied to the Legislature for an appropriation to enable it to hire outside engineers to go into that matter, and if that is afforded and the person selected, of course the records of the Company will be open and available to that man clothed with authority to investigate—or the Commission, and he would go in there, and by examination, if he could satisfy himself of the accuracy of the matter, and he is satisfied in his own mind, of course his report or the result of his investigation would be subject to cross-examination by any of the solicitors or special counsel, if there is one appointed in the case, as to how much detail he went into to satisfy himself as to the accuracy of the inventory.

It just seems to me right at this time we just probably better mark time for a little bit to see what the Legislature is going to do.

Commissioner Maullar: If we have a man capable of doing that work he might have some ideas of his own how to approach this matter.

Mr. McConnaughey: That is very true, and I do not ask for an immediate decision on this proposition. But here is another reason why we should have some local data in this record. The time is going to come when the Commission [fol. 1868] will have to, in this case, fix the rates. Now I think we are entitled, as representing the different communities, to have those rates bear some relation to the amount of property that is used and useful in our respective communities. If you go to the proposition of fixing rates in classes you will still have to consider the amount of property that is necessary or used and useful in a property of a given size, so there will have to be some relation between those two propositions, and some how or other this local data must be gotten into this record.

What I am seeking is not so much the proposition of checking this inventory. I am assuming that that is going to be done in some satisfactory way, so far as the mathematical correctness of it is concerned, and so far as the physical existence of the property is concerned. I am not concerned very much about that. But the existence of prop-

erty in Dayton is what I am interested in, and some how I want that gotten into this record, and I think we are entitled to that as a matter of law.

Commissioner Poor: Of course, Mr. McConnaughey, if we go into that proposition and go into it in detail and fix all the property in any given locality and the value of that property, we have not gained a thing by consolidating the case with the State-wide case. We might just as well have conducted it by independent cases.

Mr. McConnaughey: I do not believe that is quite true. I think there are some things that can be investigated only on a State-wide basis.

[fol. 1869] Commissioner Poor: Sure there are some features here.

Mr. McConnaughey: And there are some other things that must be brought to a local focus, it seems to me, and the combination of the two is what will finally give you the facts upon which you can fix local rates. Even if you say that two communities of the same size must pay the same rate, if in one of those communities as a general proposition—if in one of those communities there are actual conditions which effect the cost of giving telephone service, and I think there are conditions in that respect, as we can show, we are entitled to that benefit, to the benefit of that, if it is to our benefit.

Commissioner Maullar: That would work out as an exception rather than the rule.

Mr. McConnaughey: Yes, but we cannot work out those exceptions unless we have on the record the data on which to work.

Commissioner Maullar: This occurs to me, if we get some man, capable man, to work out something, that he may devise a scheme whereby a segregation of the whole will be satisfactory.

Mr. McConnaughey: Well, that is something worth considering, of course. We have raised the question, and of course if the Commission does not care to determine it at this time you can take it under consideration.

Mr. Burr has suggested to me in talking about the matter a few moments ago, as the Commission has said, there is [fol. 1870] just at this moment a reason for a little bit of marking of time in this matter, and I do not believe anybody here has any particular objection to that for a limited time, and we do not wish to hurry the matter because we are all

hoping that the arrangement in contemplation will relieve all of us of some expense and trouble in our different communities.

Mr. Snook: Just as a matter of information, may I ask a question?

Chairman Marshall: Yes.

Mr. Snook: Is not the record and the data today of all the cases a part of the general consolidated case?

Commissioner Maullar: I do not see why they are not records; they are in here.

Mr. McConnaughey: Your order so provides.

Commissioner Poor: There is no question about that, Mr. Snook.

Mr. McConnaughey: There will be some difficulty about that because they speak of a different date, but that can be taken care of.

Mr. Snook: That is the reason I asked, because those things would be a matter of bringing them up to date and this is a sort of a summary of—or at least a part of that record.

Mr. McConnaughey: I do not think that what I have asked for necessarily involves bringing in all the detailed working data. You have done a fairly good job of boiling down here [fol. 1871] and you might do it again, but I want to call attention to this fact, that in Montana, where they appraised $27,000,000.00 worth of property, the inventory which was produced to the Commission was put up in 97 volumes. Now the people you have I suppose are going to appraise something over $100,000,000.00 and you have it in two small volumes, and I will say you have done some boiling down, and I am fearful you have boiled it a little too much for our purposes.

Chairman Marshall: How would it do in view of the fact that it is pending before the General Assembly—a bill to provide funds for the Commission to investigate this telephone situation, to simply continue the case, not to any specific date, until that action is known—that is the final action is known?

Mr. McConnaughey: Don't you think we should have some sort of a date that we can look to?

Commissioner Poor: How would it do to either continue it for the purpose of setting a date until after the Legislature has either taken affirmative action that they are going to appropriate, or have indicated that they are not going to?

I know that it is going to be within a reasonable time that they are either going to do something or adjourn without having done something.

Mr. McConnaughey: Well, that would only carry us to sometime beyond April 1st any how according to the present plan.

Chairman Marshall: And we could reserve a date.

[fol. 1872] Chairman Marshall: It may carry it to the 17th.

Mr. McConnaughey: Yes.

Mr. Burr: We are anxious naturally that the hearing be speeded as much as possible.

Mr. McConnaughey: So are we.

Mr. Burr: Our rates, as the Commission and you other gentlemen know, are being collected under bond, and that is not a satisfactory situation from our standpoint.

Mr. Hagelbarger: I cannot conceive how it is unsatisfactory but you may enlighten us.

Mr. Burr: Because we would like to have it determined as early as possible that we are entitled to that money, and we do not care to be under the necessity of collecting a great deal of money and having it said to us that we are accumulating a large amount of money belonging to other people, as was suggested last night before the Legislature, as perhaps you will remember, Mr. Hagelbarger, if you were present.

For that reason and on general grounds we are anxious to speed the case as much as possible.

Now our inventory has been made as brief as could be consistently made and still be a complete inventory. We are ready at any time to assist in the examination and check of the inventory for its correctness, but we are anxious to press this case into as small a compass as possible, not only to shorten it as much as may be, but to save you gentlemen and to save ourselves just as much money as we can and [fol. 1873] to avoid the ruinous expense that has been incident to other rate cases in the past.

Mr. McConnaughey: Suppose, Mr. Burr, we desire to make some investigation with reference to Dayton; will you say that we can, without asking your plant people or anybody specific questions, have access to the record for the purpose of investigation?

Mr. Burr: I think we can do something better than that. We can get up and give to you the number and kind of any part of our plant that you may be interested in, provided

you give us advance information enough so we can gather the data together for you.

Mr. McConnaughey: Suppose we don't know exactly what we want to ask you for? We want to browse around a little bit; that is what we are after.

Mr. Burr: Well, that is the difficulty, Mr. McConnaughey; because that means browsing among records that are in constant use.

Mr. McConnaughey: Well, I think we can send the gentleman there——

Mr. Burr: I am quite satisfied that there can not be any ultimate disagreement between you and me on that matter. I am quite sure that we can satisfy you when you come definitely to know what you want in that connection.

Mr. McConnaughey: Well, that is fine.

Chairman Marshall: Well, then we will continue the matter withou d-lay, to be set when we are informed as to the ability of the Commission to have a fund available to employ [fol. 1874] additional engineers.

Mr. McConnaughey: Without fixing a definite date?

Chairman Marshall: Yes.

Commissioner Poor: In the meantime we will reserve some dates on our calendar so you won't have to go very far beyond that period.

Mr. Dotson: We understand that no matter what action is taken by the Legislature there will be a date fixed when we will all meet here again?

Chairman Marshall: Oh, yes.

Mr. Burr: What will we do on that date?

Mr. Dotson: Whatever the Commission directs. We would like to have this data that Mr. Williams has been asked for if that is available.

Mr. Burr: Well, that is all right, but what else?

Commissioner Poor: Won't that have to be governed a good deal by what our condition will be at that time? If the Legislature affords us this fund it makes this fund available where we can get an independent engineer, and also makes available to the Attorney General a fund so that he can appoint special counsel in the matter. Don't you think it will be a kind of a question of conference with all of us to see just what we want to do?

Mr. Burr: That is exactly what I was getting at. In other words, the next meeting will be a conference to determine on the future conduct of the case?

[fol. 1875] Commissioner Poor: Yes.

Mr. McConnaughey: Let me ask, has any plan been devised by the Commission as to the next step, or are you expecting to ask the Company to put in the valuation of the property they have inventoried?

Commissioner Maullar: If we employ a man to tell us how to do this thing, we want to consult with him before we start anything.

Mr. McConnaughey: Then you have not developed that plan?

Commissioner Poor: We have our own ideas about it but they may not be in accord with the ideas of the men we expect to work on it.

Mr. McConnaughey: You are not prepared at this time to ask the Company to make a valuation and be prepared to bring that forward some time in the future?

Commissioner Poor: Yes.

Mr. McConnaughey: I was going to suggest that it might be making progress, by preparing to comply with an order of that kind.

Commissioner Maullar: If they care to proceed with pricing out their inventory——

Mr. Williams: We are doing it right now.

Commissioner Poor: There is no doubt about that; they have indicated that they want the case disposed of as speedily as possible. We supposed they are doing that.

And thereupon the further hearing of this case was adjourned sine die.

[fol. 1876] BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

No. 3307

In the Matter of the Investigation and Inquiry of the Public Utilities Commission of Ohio Upon Its Own Motion for the Determination of (a) Fair Value of the Property of the Ohio Bell Telephone Company, Toll and Exchange, (b) the Just and Reasonable Rates, and (c) Reasonable Rules and Regulations for Service Furnished by Said Company to its Patrons Throughout the State of Ohio.

Proceedings and Testimony Before Honorable Charles C. Marshall, Chairman, and Honorable Geo. T. Poor and Honorable Frank B. Maullar, Public Utilities Commissioners, on Tuesday, December 22nd, 1925.

Present:

Karl E. Burr and C. S. Maltby, counsel on behalf of the Ohio Bell Telephone Company.

W. S. McConnaughey and Fred W. Postle, Special Counsel on behalf of the State of Ohio.

Carl F. Shuler, Director of Law, counsel on behalf of the City of Cleveland, Ohio.

Frank M. Dotson, Director of Law, counsel on behalf of the City of Toledo, Ohio.

Lewis F. Laylin and Myron B. Gessaman, Assistant Directors of Law, counsel on behalf of the City of Columbus, Ohio.

John D. Harshman, Director of Law, counsel on behalf of the City of Dayton, Ohio.

[fol. 1877] T. M. Miller, Director of Law, counsel on behalf of the City of Canton, Ohio;

E. H. Savore, City Solicitor, Counsel on behalf of the city of Sandusky, Ohio;

Malcolm E. Spencer, City Solicitor, counsel on behalf of the city of Springfield, Ohio;

Henry M. Hagelbarger, Director of Law, Counsel on behalf of the City of Akron, Ohio;

Paul G. Wood, Mayor of the Village of Hilliards, Ohio;

E. E. Brownell, representing the cities of Dayton and Canton, Ohio.

Be it Remembered, That on the hearing of the above entitled matter before the Public Utilities Commission of Ohio, on Tuesday, the 22nd day of December, 1925; the Ohio Bell Telephone Company, to maintain the issues on its part to be maintained, offered and introduced in testimony on its behalf, the following evidence towit:

[fol. 1878]

Tuesday Morning,
December 22nd, 1925,
10:00 o'clock.

Chairman Marshall: Gentlemen, you will come to order. The matter set for hearing at this time is case No. 3307, in the matter of the investigation and inquiry of the Public Utilities Commission of Ohio upon its own motion for the determination, first, of the fair value of the property of the Ohio Bell Telephone Company, toll and exchange, second, of the just and reasonable rates, and third, of reasonable rules and regulations for service furnished by said Company to its patrons throughout the State of Ohio.

This is really a further hearing in said matter. We understand today that the company is going to proceed to bring its inventory up to date.

Mr. Burr: Up to June 30th, 1925?

Chairman Marshall: Are you ready on behalf of the company?

Mr. Burr: Yes.

Chairman Marshall: So that everybody will know, the State of Ohio from now on is represented by Mr. W. S. McConnaughey and Mr. Fred W. Postle, as attorneys, and Mr. Hagenah, of Chicago, as engineer. You may proceed, if you are ready.

Mr. Burr: Mr. Williams may take the stand.

Mr. Dotson: If Your Honors please, although this is a state-wide inquiry, various cities that are involved or have [fol. 1879] been involved in rate hearings and others that are approaching the local rate cases in their vicinities are present this morning and without question will attend these meetings and these hearings, and the thought is we would like to have it appear in the record that our communities are represented.

Chairman Marshall: Sure. I thought that you were in the old record.

Mr. Dotson: If the stenographer will so note,—F. M. Dotson from Toledo.

Chairman Marshall: All right, anybody who wishes to appear.

Mr. Dotson: There are others here.

Chairman Marshall: Who else now?

Mr. Shuler: I appear for Cleveland.

Mr. Laylin: E. F. Laylin for the City of Columbus, and Mr. Gessaman will be here.

Mr. Harshman: John D. Harshman of the City of Dayton.

Mr. Miller: T. M. Miller, Director of Law of the city of Canton.

Mr. Savore: E. H. Savore, City Solicitor of Sandusky.

Mr. Wood: Paul G. Wood, Mayor of Hilliards.

[fol. 1880] George B. Williams, recalled as a witness on behalf of the Ohio Bell Telephone Company testified as follows:

Examined by Mr. Burr:

Q. Mr. Williams, you are the same George B. Williams who has previously testified in this case?

A. I am.

Q. In connection with your previous testimony there was offered in evidence Williams' Exhibit No. 3-A and 3-B, which represented the inventory of the property of the Ohio Bell Telephone Company as of June 30th, 1924, which we will hereafter refer to as the 1924 inventory. Tell the Commission whether or not you have prepared what we will now call the 1925 inventory, that is to say the inventory of the Ohio Bell Telephone Company's property as of June 30th, 1925?

A. I have.

Q. What does the socalled 1925 inventory represent?

A. I- represents the property of the Ohio Bell Telephone Company as of June 30th, 1925 and takes into consideration the property shown in the June 30th, 1924 inventory and also the property which is in the way of additions and deductions for the year ending June 30th, 1925.

Mr. Burr: The 1925 inventory may be marked for identification Williams' Exhibit 5-A, 5-B and 5-C.

And thereupon the inventory above referred to was marked for the purposes of identification as Williams' Exhibits 5-A, 5-B and 5-C.

[fol. 1881] Q. What, if you please, were the reasons for the preparation of this 1925 inventory?

A. I have two main reasons for preparing the 1925 inventory. The first was that it is desirable to have record maps indicating the location of the various classes of property as of as nearly the date in which any field check is made as possible. The record maps that we have are working records. On them are placed the changes in the way of plant additions and deductions from day to day, and they are kept up in that way from one time to another. It is not possible to take those records back to any previous date, such as June 30th, 1924. For that reason it was desirable to bring an inventory forward in as much as the maps could not be taken backward. The second reason was that it is desirable to have your inventory down as nearly the date of your field check as possible. For this reason I have brought the inventory forward. In so doing I have eliminated the necessity of checking a year's additions and deduction to the Ohio Bell Telephone Company's property in the State of Ohio.

Q. That is, the necessity for that check by the Commission?

A. Yes, sir, that is right.

Q. Proceed.

A. We have added roughly in the neighborhood of ten or twelve million dollars worth of property during the year ending June 30, 1925. We have deducted or displaced roughly property to the extent of six or seven million dollars. This means that there has been a gross property change in the neighborhood of eighteen or twenty million dollars. By bringing the inventory fo-ward to June 30th, [fol. 1882] 1925, we have eliminated the necessity for checking that eighteen or twenty million dollars' worth of property changes, and we have eliminated, of course, any incidental work in connection with the Ohio Bell Telephone Company in regard to that sort of a check.

Q. Generally speaking, has the 1925 inventory been prepared in the same manner and upon the same basis as the 1924 one, to which you have already testified?

A. It has. It has been prepared in the same manner, with the same care, in the same form, and has as its basis the same field inventories as the 1924 inventory.

Q. To what extent, if any, has the 1925 inventory been expanded over the 1924 one?

A. There are certain expansions which I have made in the 1925 inventory over those that appear—over the details that appear in the 1924 inventory, in order to furnish more detail for the use of the State.

Q. Does the 1925 inventory, which has been marked for identification Williams' Exhibit- 5-A, 5-B and 5-C correctly show the property of the Ohio Bell Telephone Company as of June 30th, 1925?

A. It does.

Mr. Burr: We offer in evidence Williams' Exhibits No. 5-A, 5-B and 5-C.

Chairman Marshall: They may be admitted.

And thereupon the inventory above offered was admitted in evidence on behalf of the Ohio Bell Telephone Company, and is herewith submitted, marked Williams' Exhibit- No. [fol. 1883] 5-A, 5-B and 5-C, and made a part hereof.

Q. Now, will you take up, if you please, the index of volume No. 1, that is to say Williams' Exhibit 5-A, and show the paging for the several accounts shown in the inventory and the corresponding pages for your previous inventory, that is to say the 1924 inventory?

Mr. Burr: This, I may say, is for the benefit of counsel and the Commission if and when they may care to compare the two inventories and the testimony with respect to both of them.

A. In the 1924 inventory, in the index on page 1, there appears the first general division under the heading of "land." The first subdivision under this heading is miscellaneous investments, account 111, which is shown in the 1924 inventory, on pages 1 to 3 inclusive. In the 1925 inventory, the corresponding class of property also app-ars on pages 1 to 3 inclusive. The testimony offered in behalf of the 1924 inventory applies equally to the 1925 inventory, with the exception of the change in page numbers which I will refer to as I go along.

Q. Does that apply with respect to all of the accounts shown in both inventories?

A. It does. In the 1924 inventory, under the division of land, the second subdivision, indicated as 1-B, as land, account 211, appearing on pages 4 to 18 inclusive. In the 1925 inventory this class of property appears on pages 4 to 17 inclusive.

The next general division of the inventory is No. 2, the [fol. 1884] buildings. The first subdivision under buildings is 2-a, miscellaneous investments, account 111, appearing in the 1924 inventory under pages 19 to 23 inclusive, and appearing in the 1925 inventory under pages 18 to 22 inclusive.

The second subdivision under buildings is 2-B, buildings, account 212, appearing in the 1924 on pages 24 to 45 inclusive and in the 1925 inventory, on pages 23 to 43 inclusive.

The third division is central office equipment, of which the first subdivision is 3-A, central office telephone equipment, account No. 221, appearing in the 1924 inventory on pages 46 to 97 inclusive, and in the 1925 inventory appearing on pages 44 to 210 inclusive.

Commissioner Poor: Doesn't that all speak for itself on the index?

Mr. Burr: No, it does not at all.

Commissioner Poor: That is, the situation or where it appears in the 1924 inventory?

Mr. Burr: The accounts appear under the same headings in both Exhibits, that is, in the 1924 and in the 1925 inventory, but the paging, the paging of the items and accounts, is different in the 1924 inventory than it is in the 1925, and I have considered it would be very much for the benefit of commission and counsel if there could be put into the record at this time this cross-reference, which would show the different paging in the two Exhibits, so that in reading the testimony with reference to the 1924 Exhibit, that same testimony could be made to apply to the 1925 Exhibit by [fol. 1885] merely examining the page analysis Mr. Williams is now making.

Commissioner Poor: If it is of any help, go ahead, but let's don't put in any unnecessary things.

Mr. Dotson: Aren't the titles, the designations used in the 1925 Exhibit, identically the same as those of the 1924,

so that by a comparison you can follow the inventories under that title?

Mr. Burr: Let me make this suggestion. Let Mr. Williams prepare a comparison of the paging of the accounts contained in the two inventories in writing, and submit it as an Exhibit.

Q. Can you do that, Mr. Williams?

A. Yes, I can do that.

Mr. McConnaughey: Make it in form so that it can be put into the Exhibit.

Mr. Burr: Yes, the suggestion has been made that the pages of the Exhibit which you are to make shall correspond to the size of the pages in the inventory, so that that Exhibit could be pasted in or otherwise made a part of Exhibit- 5-A, 5-B and 5-C.

The Witness: Yes.

Mr. Burr: I suggest also that we reserve the number, Williams' Exhibit 5-D, for that analysis.

And thereupon the analysis above referred to was offered and admitted in evidence on behalf of the Ohio Bell Telephone Company, copies thereof to be supplied by the company and to be marked for the purposes of identification as Williams' Exhibit No. 5-B, and made a part hereof.

[fol. 1886] Q. In your testimony with respect to Williams' Exhibit- 3-A and 3-B, you discussed the various accounts according to their account numbers and as they appear in the index of that Exhibit, and also in the index of the 1925 Exhibit. Tell the Commission whether or not your discussion of the several accounts made with respect to the 1924 inventory applies with like force to the 1925 inventory?

A. It does, the only exception being the page numbers.

Q. In the 1924 inventory, there are certain photographs which have been omitted from the 1925 inventory. Tell the Commission whether or not those photographs and the explanation of them, contained in your previous testimony, applies with like force to the 1925 inventory?

A. Yes, they do. The photographs were for descriptive purposes only and they apply with equal force to the 1925 inventory.

Q. What system of accounting has been followed with respect to the 1925 inventory?

A. The system of accounts prescribed by the Interstate Commerce Commission for telephone companies and adopted by the Public Utilities Commission of Ohio.

Q. In the same manner as was true with respect to the 1924 inventory?

A. Yes, sir.

Q. Does your testimony on both direct examination and cross examination in explanation and expansion of the 1924 inventory apply with equal force to the 1925 inventory?

A. Read that question.

(Question read.)

A. It does.

[fol. 1887] Q. In the case of the 1924 inventory what is meant by the associated items which are shown at the end of each account?

A. Those are the items that should be taken into consideration in computing the value of the property, in addition to the major items listed in detail.

Q. Does your testimony with respect to the 1924 inventory as to those items apply with equal force here to the 1925 inventory?

A. It does.

Q. Now, as a sample page of the 1924 inventory, take for example, if you please, page 54 of volume 2?

A. 1924 or '25.

Q. Of the 1925 inventory. Explain briefly the method followed by you in making the inventory as listed by that page which I have chosen at random?

A. To be sure that we have the same page, those are the multiple switchboards at Toledo?

Q. No, toll ~~pole~~ lines, 4-G, account 251. Read that question please.

(Question read.)

A. The explanation follows exactly the same lines as it did in the testimony relative to the 1924 inventory and consists briefly of the following: Field inventories were taken in detail of the various exchange properties throughout the State of Ohio as of different dates, and in compiling both the 1924 and the 1925 inventories introduced here in evidence, the results of the exchange inventories and likewise the toll inventories were combined and thereto added [fol. 1888] the additions subsequent to the date of the field

inventories, the dates of the field inventories and from them were taken the deductions to June 30th, 1924, and June 30th, 1925, respectively.

Q. Mr. Williams, you testified as pages 109 to 119 of the records with respect to the method by which the inventory was made, and I assume from your previous answers that all of that testimony applies equally to the 1925 inventory?

A. It does, with the same force and effect.

Q. What I intended to ask you about was an explanation of this single sample page 54 of the 1925 inventory, in order to show what the different figures and words on that page mean. For example, you have under the heading of poles 15 foot average class C "each," 327.8. Please explain what is meant by that page. You can do it very briefly.

A. As the heading at the top of the page is 4, distributing system, that means that under the general divisions of property distributing system occupies the fourth place. The next line shows 4-G, the g indicating the position that the toll pole lines, account No. 251, take under the main division of distributing system. Under the heading of item are shown the number of poles by height and by average class.

Under the heading of unit is indicated the manner in which the poles were classified, that is, they were classified at a designation of "each," indicating that a unit was the single pole for setting up the number of poles.

Under the heading of quantity is shown the number of units, corresponding to each particular classification of height and average class.

[fol. 1889] For instance, in the first line, under the heading "item" the kind of pole is a 15 foot average class C pole. They are indicated under the heading of unit as each, or so many units. Under the heading of quantity, 327.8 units or number of poles of that particular class and average height. The crossarms at the bottom of that column are indicated in a similar manner, and below that is set up a list of the miscellaneous or associated items, proper numbers and proportions of which shall be taken into consideration in arriving at the value of the toll pole line account.

Q. Do the kinds, quantities and amounts of property and the statements with respect to them in your Exhibit No. 5 for the different classes of plant there inventoried correctly

represent and show to the best of your knowledge and belief the actual kinds and quantities and amounts of property owned by the company as of June 30th, 1925?

A. They do.

Q. Going back now to the index of volume 1 and referring you to the first item, that of land, tell the Commission how you proceeded with the appraisal of the land of the company?

A. I first divided the land into the two general accounts or headings, account 111, miscellaneous investments, land, and account 211, land. The first account covering that land which was not actively in use and not actively used by the telephone company and for which it was the intention to make disposition. Under account 211, land, I have listed the land which was actually in use or to be used as of June 30th, 1925. Inasmuch as the land under account 111 was to [fol. 1890] be disposed of, I have used for the appraisal or the appraisals of those parcels of land under that account the original cost as reflected in the records of the company. Under account No. 211, I have secured affidavits from real estate boards of real estate dealers in each community covering all but five of the 88 parcels of land under that account. On the five I have used the original cost as reflected by the records of the company, inasmuch as those five particular parcels were a very recent purchase.

Q. In some of the cities where the land is located, were there at time of its appraisal sub-committees or sub-organizations, known as the appraisal boards or the appraisal committees of the real *real* estate boards of those cities?

A. Yes, they were generally known either as the appraisal committee or the valuation committee of the real estate board.

Q. And to what extent did you make use of the services of those valuation committees?

A. Wherever there were such committees existing, we used their services entirely.

Q. Now, you speak of the Real Estate Board of the community. What do you mean by that?

A. A Board or a certain number of men who were engaged in the business of dealing in real estate, and incidentally the valuations of parcels of real estate in that particula- community.

Q. Now, where no appraisal committee of a real estate board was available, or, better, where none existed, how did

you choose the men who were to appraise the real estate in that community?

A. We found out the men who dealt in real estate, whose business it was to deal in real estate in that community, [fol. 1891] buying and selling real estate, and who were therefore familiar with real estate values, and we went to them and secured from them affidavits in a manner similar to that by which we secured from valuation or appraisal committees in the other cities or towns.

Q. Were the real estate appraisers in the case of any parcel of land shown in your appraisal to be hereinafter referred to told of the purpose for which the land was to be appraised by them?

A. No, they were not.

Q. They were requested to give you what in the way of a valuation?

A. A fair value.

Q. Most of the affidavits were secured in what year from the real estate men?

A. My recollection is in the year 1925.

Q. Were a few of them secured prior to that date?

A. They were.

Q. With respect to those which were made prior to the year 1925, what is your judgment as to the change, if any, in the values covered by their affidavits? By that I mean the change up to June 30th, 1925?

A. My judgment would be that the value would be higher as of June 30th, 1925.

Q. Why?

A. Because those parcels are located in growing communities, and as a general proposition the trend of real estate values is upwards.

Q. With respect to the five which have been appraised at their cost to the company as shown by its books, why did you use that book value?

A. Because on those particular parcels the purchase was recent, within a year or possibly a year and a half at the [fol. 1892] outside, and I felt that the original cost as reflected on the records of the company was indicative of the reproduction value today, and because by using that I could save that much expense.

Q. This business of securing an appraisal of the real estate of the company is quite an expensive undertaking, is it not?

A. It is, yes, sir.

Q. Under whose supervision and direction were the appraisals of the various parcels of real estate owned by the company and covered by the affidavits to which you have referred made?

A. My own.

Q. Please look at the volume of affidavits, which may be marked for identification Williams' Exhibit No. 6, and tell the Commission whether or not it contains the original signed affidavits of the real estate appraisers who appraised the real estate of the Ohio Bell Telephone Company?

A. It does.

And thereupon the volume of affidavits above referred to was marked for the purposes of identification as Williams' Exhibit No. 6.

Q. Following each affidavit contained in your Exhibit No. 6 there is a map or plat. Tell the Commission what those plats are and to what affidavits respectively they refer.

A. Those plats or maps indicate the size, shape and location of the particular parcels of land to which they refer, which parcel of land is the one covered by the affidavit immediately preceding the map or plat in each case.

[fol. 1893] Q. Will you please go through the various affidavits and tell the Commission the parcel as shown in your appraisal volume for the land to which each one of the affidavits applies? You can make it very brief.

Mr. McConnaughey: Don't that speak for itself?

Mr. Burr: No, it does not.

A. The first affidavit covering the parcel of land at 72-76 South High Street, Akron, Ohio corresponds to parcel No. 1 at Akron, Ohio on page 4 of volume No. 1 in the 1925 inventory.

Q. To these corresponding descriptions which you have given of the parcels apply equally to the parcels as they are listed in your appraisal of the land to be hereinafter referred to?

A. Yes, sir.

Q. Now, proceed, if you please, and do it as briefly as possible.

A. The second affidavit covering land located at 82-84 South High Street corresponds to parcel No. 2 at Akron, Ohio shown on page 4 of the inventory.

Commissioner Poor: Couldn't that be put in in the same way as you did the others?

Mr. Burr: Yes, sir, we would be very glad to do it, and it is our suggestion that the number Williams' Exhibit 6-A be reserved for that purpose.

We offer Williams' Exhibit No. 6 in evidence and suggest this stipulation with respect to it:

It is agreed by counsel for the respective parties hereto and by the Commission that the foregoing affidavits, being those contained in Williams' Exhibit No. 6, showing the values of the lands therein appraised respectively, may be [fol. 1894] received in evidence without further proof of the signature of the affiants, the affidavits all containing original signatures;

That the affiants, if called and sworn as witnesses in this cause, would testify as and in accordance with their statements contained in their respective affidavits, including their judgment as to the fair value of the property appraised in the affidavits respectively;

And that the affidavits may be admitted in evidence in lieu of the oral testimony of the affiants and subject to the right of cross examination on behalf of any interested party in this cause, with the further stipulation that the telephone company will produce for such cross examination any of the affiants whose cross examination is requested.

Mr. McConnaughey: That is all.

Chairman Marshall: Is that agreeable to counsel?

Mr. McConnaughey: I think that is all right.

Chairman Marshall: If that is so, it may be admitted.

And thereupon the volume of affidavits above referred to was admitted in evidence on behalf of the Ohio Bell Telephone Company, and is herewith submitted, marked Williams' Exhibit No. 6, and made a part hereof.

And thereupon the description or analysis of affidavits hereinbefore referred to was admitted in evidence on behalf of the Ohio Bell Telephone Company, copies thereof to be supplied by the telephone company, and is herewith submitted, marked Williams' Exhibit 6-A, and made a part hereof.

[fol. 1895] Q. Where the appraisers are shown in one of the affidavits as members of a real estate board of a municipality other than that in which the property appraised by

them is located, tell the Commission how that happened and why you used those appraisers?

A. Because the Appraisal Committee or the Appraisal Board happened to be located in a community which was close to another community where another parcel of land —where the company owned another parcel of land, and on account of the two parcels being adjacent, the real estate committee were familiar with the values of real estate in both communities, such, for instance, as Akron, Barberton and Cuyahoga Falls. The members of the Real Estate Board in that case dealt in and bought and sold land and real estate in all three communities and were familiar with the value of real estate in all three of those communities.

Q. Point out, if you please, the five parcels representing recent purchases and which were appraised by you at their actual cost to the company as shown by its books?

A. The first one is parcel No. 3 at Canton, located at 405 Cleveland Avenue.

Mr. McConnaughey: Will you give the page please?

The Witness: On page 5 of volume No. 1. The second parcel is parcel No. 19 located at 720 to 730 Huron Road, Cleveland, Ohio.

Q. Just a moment, before you leave the first parcel that you have described, that is to say, parcel No. 3 at Canton. What is the value of that property as shown by the company's books?

Mr. McConnaughey: Do the company's books show the [fol. 1896] value or the cost?

Mr. Burr: Cost. Did I say value?

Mr. McConnaughey: Yes.

Mr. Burr: Yes, change it. Change value to cost. Thank you.

A. $128,569.00.

Q. Now, proceed with the rest of them giving the cost of the company as shown by its books in each case.

A. The second parcel is parcel No. 19, located at 720 to 730 Huron Road, Cleveland, Ohio, and the original cost of that parcel of land as shown by the records of the company was $309,664.00.

The third parcel is parcel No. 21, located on West 35th Street, opposite Searsdale Avenue, at Cleveland, Ohio, on

page 9, volume 1, the original cost of which according to the company's records was $34,609.00.

The previous parcel I should have stated is shown on page No. 8 of volume No. 1.

Q. Now, Mr. Williams, counsel have asked whether you can give the date of acquisition of the property by the company in the case of each one of these as you go along?

A. I can.

Q. Will you go back to parcel No. 3 at Canton?

A. Parcel No. 3 at Canton was acquired in April, April 22nd, 1924.

Q. Yes.

A. The second parcel at 720 to 730 Huron Road, Cleveland, Ohio, being parcel No. 19 at Cleveland was acquired February 28th, 1923.

[fol. 1897] The third parcel, being parcel No. 21 at Cleveland, and located on West 35th Street, opposite Searsdale Avenue, was purchased April 28th, 1925.

The fourth parcel will be found on page 11 of volume No. 1, and is designated as parcel No. 18, located on the northwest corner of Oakland Park Avenue and Indianola Avenue, Columbus, Ohio, for which the records of the company show the original cost as $20,300.00, and this parcel was acquired June 28th, 1925.

Q. That is to be used for a far north exchange, is it not?

A. That is right.

Mr. McConnaughey: What was that date please?

The Witness: June 28th, 1925. Just got under the wire. The 5th and last parcel is designated as parcel No. 8, located at 115 to 127 Huron Street, Toledo, Ohio, for which the original cost as shown by the records of that company was $159,260.00, and this parcel was acquired November 8th, 1923.

Mr. Postle: Inventory page please.

Mr. McConnaughey: 16.

The Witness: The inventory page is No. 16.

Q. Now, these five parcels to which you have just testified are contained in what is known as the 211 account?

A. That is right.

Q. Property used or to be presently used in the business of the company?

A. Yes, sir, and in this connection I might also say that in Williams' Exhibit No. 6, containing the affidavits and the [fol. 1898] plats or maps corresponding to those affidavits, I have also included maps or plats, although, of course, no affidavits, for these five parcels which I have included in the valuation and original cost, and those five plats or maps appear in Williams' Exhibit No. 6 in their proper order, corresponding to the order in which they appear in the inventory and in the appraisal.

Q. Now, with reference to these properties for which you have given the cost to the company as shown by its books and which you have appraised at those costs, how, if you know, were those properties acquired by the company?

A. By purchase.

Q. Were they acquired in the open market?

A. That is my understanding, yes, sir.

Q. What do you mean by "open market"?

A. Why, at a sale as between two individuals, in which other parties than the individuals who actually concluded the sale might have participated.

Q. Now, in your appraisal of the property of the company which will be hereinafter offered in evidence, have you tabulated the real estate values as shown by the affidavits contained in Exhibit No. 6, and also as secured by you from the books of the company with respect to the five parcels to which you have just testified?

A. I have. They were carried into the appraisal or also carried into the appraisal in the same order as they appear in Williams' Exhibit 6, and at the same values as they appear in Williams' Exhibit 6 except for those five parcels for which I used original cost.

Q. And in your appraisal which you have referred to will [fol. 1899] there also be included the appraisal of the buildings which are to be referred to in the testimony of witnesses who are to follow?

A. Yes, sir.

Q. Now, the testimony with respect to building values will be based upon whose testimony?

A. Mr. Myers.

Mr. Burr: Mr. Williams may stand aside for the present and Mr. Myers may take the stand.

Chairman Marshall: You do not care to cross examine at this time?

Mr. McConnaughey: No.

(Witness temporarily excused.)

[fol. 1900] And also ERNEST L. MYERS, called as a witness on behalf of the Ohio Bell Telephone Company being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You may state your name.
A. Ernest L. Myers.
Q. What is and has been your occupation?
A. Construction business.
Q. Construction of what, if you please?
A. Buildings mostly, some bridges and dams.
Q. What sort of buildings?
A. Commercial buildings, office buildings, residences, warehouses.
Q. Buildings of all kinds?
A. All kinds that I know of.
Q. Where are you now employed?
A. I am employed now by the Bell Telephone Company.
Q. That is, the Ohio Bell Telephone Company.
A. That is the Ohio Bell Telephone Company.
Q. How long have you been engaged in the construction business?
A. Since 1907—18 years.
Q. Prior to 1907, what training, if any, had you had in your profession?
A. A High School education, two years' training at Columbia University on structural engineering, and afterwards one year at Carnegie Institute.
Q. What was your study at Carnegie Institute?
A. The same thing, structural engineering.
Q. Give the Commission an outline of your work since [fol. 1901] 1907?
A. In 1907 I was employed by the Erie Railroad in New York City as structural draftsman on bridges and buildings.
Q. In connection with that work what did you do?
A. Made plans, made plans for buildings, various railroad buildings, such as stations, machine shops, round-

houses, warehouses, buildings that are used on railroad work.

Q. How long were you engaged in that capacity?

A. About a year, with the Erie Railroad Company. I then went to Pittsburgh for Hyle & Patterson.

Q. Who were Hyle & Patterson?

A. They were designers and builders of various mine machinery, machinery that was used around mines.

Q. How long were you employed there?

A. About two years, I should judge.

Q. After that what did you do?

A. I went with McClintock & Marshall. They also designed and built buildings, warehouses, office buildings and commercial buildings, most any building or bridge.

Q. What was the character of your work while employed by those last two firms?

A. I was a structural draftsman and estimator for that company for two years.

Q. What do you mean by estimator?

A. We estimated the quantities after a design had been made, the quantities in the structure, so as to be able to make a bid on the work.

Q. You estimated the quantities of what?

A. The quantities of the material involved in the structures.

Q. Did that include the labor necessary to put the materials in place?

[fol. 1902] A. Yes, sir. Labor was put on. The prices of the labor and material were put on. However, I had nothing to do with that. I simply estimated quantities for McClintock & Marshall.

Q. Now, McClintock & Marshall's company of Pittsburgh is very well known, and at the risk of asking you to state something with which everybody here is familiar, will you tell the Commission something of the extent of that company's work and where their offices are located?

A. They are the biggest independent structural steel company in the world, next only to the United Steel.

Q. United States Steel Corporation?

A. Yes. They have offices all over the United States. They are now putting up the steel work for this building across the street.

Q. You are now referring to the socalled A. I. U. building?

A. The Insurance Building.

Q. Across the street from the office where the Commission is holding this hearing?

A. That is right.

Q. In addition to the structural steel work fabricated by that company, was it engaged in any other kind of work while you were with them?

A. We used to take contracts for building buildings, not, however, office buildings, mostly manufacturing buildings at that time.

Q. Now, takes you down to 1911, does it not?

A. 1911, yes.

Q. Where were you employed after 1911?

A. From 1911 to 1914 I was employed as a structural designer for the New York Central Railroad in Cleveland. While there I designed similar buildings to those mentioned for the Erie Railroad, such as passenger stations, [fol. 1903] railroad shops of all kinds, roundhouses, bridges, abutments, retaining walls.

Q. Machine shops?

A. Yes.

Q. Stations on that railroad?

A. Yes.

Q. Did you also do any work in connection with the Cleveland Belt Line Railroad during that time?

A. Yes, I designed several bridges on the Cleveland Belt Line Railroad.

Q. From May, 1914, to June, 1914, you were in the business of designing houses and so forth, were you not?

A. Yes, from May, 1914, to June, 1915, I was employed for that. For almost a year, around there, I designed houses and so forth.

Q. What, if anything, did you do with reference to estimating the cost for building those houses?

A. Well, I had to estimate the cost in order to get the money to build them.

Q. Now, you say you estimated the cost. Just elaborate that a little and tell the Commission how that estimate was drafted?

A. Well, from the plans and specifications I was able to get the quantities and kinds of material that were necessary; also the labor needed to erect the building. From my knowledge of labor and material I was able to compute what the prices of these houses should be.

Q. From 1915 to 1916 how were you employed?

A. From 1915 to 1916 I was estimator for the W. F. Hyde Company of Cleveland.

Q. What did you do in that capacity?

A. Well, they are specialists in remodeling buildings. The big end of our work was remodeling, of course. How-
[fol. 1904] ever, we built several new structures from the ground up. My duties there, of course, were to design structural members for these alterations and computing the costs to complete the job.

Q. That includes the cost of both labor and material?

A. Yes, both labor and material.

Q. What were some of the large buildings which were reconstructed in Cleveland on your estimates?

A. For the W. F. Hyde Company the Euclid Hotel, the Bennett & Fish Building, the Morehouse Building and several smaller buildings I can't remember just now.

Q. Following 1916 what did you do?

A. From 1916 to 1920 I was office manager and chief estimator for the Sam W. Emerson Construction Company.

Q. During that time did you have any force of men under you?

A. I had a large force of men in the office and under my supervision that made all of the bids for new work, which meant buying material, taking quantities of labor and material from plans, computing the quantities, pricing them, making bids for new work.

Q. In other words, your firm was a firm of building contractors?

A. Building contractors only.

Q. They computed the cost of buildings and then built them for such persons as employed them?

A. That is right.

Q. During that time you say you were what?

A. I was chief estimator and office manager.

Q. Name some of the buildings for which you made the estimates and the cost of which you computed while you were with the Sam W. Emerson Company?

[fol. 1905] A. Well, among the office building type were the Crown Building, the Kendall Seed Building, the office building of the American Steel & Wire Company, the Hudson Stuyvesant Building. Possibly some more of that type. In the warehouse and manufacturing type we built the

Cleveland Tractor Works, now known as the Rollins Motor Company and the Grabler Manufacturing Company plant.

Q. What is their business?

A. Well, they make drop forgings mostly for automobile parts. During the War the entire plant, I guess, made shells for the army.

Q. Name some more buildings, if you can.

A. Built much more work for the National Lamp Company, different types of buildings for them; Standard Oil Company; Tropical Paint Company, the Ohio Body & Blower Company; Cleveland Punch & Shear Company, L. M. & N. Osborn Company; and many others I cannot remember just now.

Q. The Torbenson Axle Company?

A. Yes, sir.

Q. Cleveland Steel Products Company?

A. Yes, sir.

Q. Van Dorn Iron Works?

A. Van Dorn Iron Works and the Van Dorn-Dutton Electric Works.

Q. The Acme Manufacturing Company?

A. The Acme Manufacturing Company.

Q. Union Salt Works?

A. Yes, the Union Salt Works.

Q. In general what was the type or what were the types of the buildings built by those different industries?

A. In many cases the construction was sturdy construction like I found in the Ohio Bell Telephone Company's buildings, but the exteriors in most cases were not as ornate as I found on the Ohio Bell Telephone Company's Building. [fol. 1906] Q. Did these buildings represent the various types of commercial, manufacturing, office, warehouse, storage buildings?

A. They do, all types of buildings.

Q. You said something about the buildings being exteriorally perhaps not as fine as those of the Ohio Bell Telephone Company. What did you find with reference to the buildings of that company?

A. Of the Ohio Bell Telephone Company?

Q. Yes, sir.

A. I found in most cases the buildings owned by the Bell Telephone Company, or the Ohio Bell Telephone Company, were located in the business district, restricted busi-

ness district, or in the residential district, and that these buildings were designed to be in keeping with the surroundings.

Q. As estimator of the foregoing buildings I think you have already said something about what you did, but what in general did your duties require of you in order to enable you to estimate the cost of those buildings?

A. I was required to know the price of labor and material that would be used in any of these buildings, and I was also required to be able to take a set of plans and specifications and from them compute the quantities of both labor and material that would be needed to complete the buildings, and then price them, and from those prices make a bid as to what we were willing to sign a contract for to complete the job.

Q. Have you since computed the cost of the materials and labor for the buildings of the Ohio Bell Telephone Company?

A. I have.

[fol. 1907] Q. Have you computed the reproduction cost new of those various buildings?

A. I have as of June 30th, 1925.

Q. We will come back to that again in a moment, because I want to ask you something of your work from 1920 on, your experience so far having taken you down to that date?

A. In 1920-21 I was President of the Myers-Kuhn Construction Company of Cleveland.

Q. What was the business of that Company?

A. Buildings only. We constructed buildings.

Q. Under whose supervision was the work of computing the cost of buildings constructed by that organization?

A. My own supervision.

Q. And in general what sort of buildings were constructed by you?

A. We built the bag factory for the Adams Bag Company of Chagrin Falls, which was a factory type. We put the six and seventh story additions on the A. S. Yeoman Building in Cleveland, which was of the office type. We erected an addition to the Bamberger-Reinthal Company's plant; also additions to the Patterson-Leach Company's plant.

Q. Buildings for the Verden Manufacturing Company of Cleveland?

A. Manufacturing buildings for the Verden Manufacturing Company of Cleveland.

Q. From 1922 to 1924 what did you do?

A. From 1922 to 1924 I was with the city of Cleveland, first as building commissioner and later on as Director of Public Utilities.

Q. For what city?

A. The city of Cleveland.

Q. Under your direct supervision what buildings in the city of Cleveland or for the city of Cleveland were constructed or builded?

A. Under my direct supervision the Cleveland City Hos-
[fol. 1908] pital group was completed, the Public Auditorium, the Fairmont Pumping Station; several other smaller buildings.

Q. What about the Filtration Buildings?

A. Under my supervision the Filtration Buildings and the plant, Baldwin Filtration Plant.

Q. What about the coagulation basins for the city?

A. The coagulation basins for the city were started under my supervision; also pipe lines for water throughout the city.

Q. What about the Fairmunt Pumping Station and gate houses?

A. As I said before the Fairmont Pumping Station had been started under my supervision and the gate houses with it.

Q. Now, in their construction, as well as exteriorally, what was the type of those buildings as compared with the general type of telephone company's buildings which you appraised?

A. In most cases the two types of buildings, the Ohio Bell Telephone Company and the City of Cleveland were quite similar, heavy construction.

Q. What about their exteriors?

A. Monumental exterior.

Q. That is, to conform to the——

A. Surrounding buildings.

Q. During a part of the year 1924 did you have anything to do with the construction of the Union Trust Building in Cleveland?

A. Yes, I was the superintendent of the Union Trust

Company of Cleveland, on the construction of the main building for the Thompson-Sterritt Company.

Q. What was the Thompson-Sterritt Company?

[fol. 1909] A. They were the general contractors for the building.

Q. Give the Commission some idea of the size of the building?

A. Supposed to be one of the largest buildings in the world. The banking room is the largest banking room in the world.

Q. How many stories?

A. 22 stories.

Q. Do you remember the cost of the building?

A. Approximately $13,000,000.

Q. That is the bare bones of the building itself?

A. Building only.

Q. While you were concerned there what sort of work was involved and what were your duties?

A. My duties consisted mostly of supervising the construction of different parts of the building. That, of course, included almost everything on the building.

Q. After your employment in connection with that building what did you do?

A. When the Union Trust Building was completed in May I was made owner's representative of the Union Mortgage, which was the old company. Under my supervision the alterations on that building were made, which consisted of taking out the second and third floor and building in a new second and third floor, carrying the other 16 floors on shoring. That building is on the corner of Ninth Street and Euclid in Cleveland, the most congested corner we have, so that every precaution we had had to be used.

Q. You literally suspended the building in the air while the new columns were being placed under it?

A. While our new second and third floors were built in, yes.

Q. What was the cost of remodeling done on that building?

[fol. 1910] A. That cost about approximately $700,000.

Q. During the 18 years of your work what has been the total cost of the building projects which were computed either directly by you or under your direct supervision and control?

A. Approximately $125,000,000.

Q. Of the amount computed approximately what amount in dollars was constructed?

A. $75,000,000.

Q. I think you said that your present employment is with the Ohio Bell Telephone Company?

A. It is.

Q. In what capacity?

A. Building appraisers.

Q. And how long have you been employed in that capacity?

A. Since March, 1925.

Q. As building appraiser for the company what have been your duties since that date?

A. My duties have been to compute the costs of all the buildings owned by the Ohio Bell Telephone Company in the State of Ohio.

Q. Does that include the cost of reproduction new of the properties?

A. It does.

Q. As of what date?

A. June 30th, 1925.

Q. As of that date how many buildings did the company own and operate which were appraised by you?

A. 95 buildings.

Q. Have you made a personal inspection of all of those buildings?

A. I have.

Q. Since March 1st, 1925, has all of your time been employed in the inspection of those buildings and in acquainting yourself with the deterioration existing in them and in computing their reproduction cost new?

A. It has.

Mr. McConnaughey: You are leading this witness right [fol. 1911] along, Mr. Burr. Why don't you let him testify?

Q. What type of construction did you find represented in the 79 buildings which you appraised, or 95, I should say? Change that to 95 buildings.

A. I should say commercial type of buildings generally, residential in some cases. While commercial type of building, they were of heavier type of construction than the ordinary commercial building.

Q. Are those buildings the same as those listed in Williams' inventory Exhibit No. 5-A at pages Nos. 23 to 43 inclusive?

A. I cannot tell that.

Q. Look at the Exhibit, if you please, and then answer the question.

A. Read the question.

(Question read.)

A. Yes, sir, they are.

Q. In general what methods did you use in making your appraisal of those buildings, and, by "appraisal" at this point I mean the computation of their reproduction cost new?

A. I used three methods. The first method, when plans and specifications were complete and available. The second method and the third method, when the plans and specifications were not available.

Under the first method I took quantities of labor and material from the plans and specifications, and, along with those, made a personal inspection of the building, to see that the building had been built according to plans and specifications. After this work had all been identified, I then priced these quantities and arrived at the prices which I have put down here.

In the second method, where plans and specifications were [fol. 1912] not available, I made a visit to the building, took measurements of the building, made my own specifications as to what had been built into it and the class of workmanship. From these notes and specifications I then priced that type of building.

The third method I used was to take the volume content of the building, price that at so much a cubic foot, in order to arrive at the appraised price. The prices I used in pricing out the cubic feet of building were those that I had used before.

Q. To what extent did you use the third method?

A. A very small percentage. I do not think we have more than about five or six buildings out of this 95, out of these 95 buildings, that have been appraised by the third method.

Q. What is the character of the buildings generally appraised by the third method?

A. Small, frame buildings, small metal buildings, used for garages and so forth.

Q. Will you please look at the compilation of pages 23 to 43 inclusive, so as to conform to Mr. Williams' inventory paging, which may be marked for identification Myers' Exhibit No. 1, and tell the Commission whether or not it shows and represents your best judgment of the reproduction cost new as of June 30th, 1925, of the various buildings of the Ohio Bell Telephone Company, enumerated and described in the Exhibit, and appraised by you in accordance with the methods heretofore described?

A. It does represent my best judgment as to the value of these buildings owned and operated by the Bell Telephone Company.

[fol. 1913] Q. By "value" what do you mean? What sort of cost?

A. I mean the reproduction cost as of June 30th, 1925.

Mr. Shuler: Does that Exhibit show as to the individual items whether he used the first second or third method?

Mr. Burr: It does not, Mr. Shuler, but that will be all covered by his oral testimony. I did not think it quite proper to write that on the Exhibit. It might perhaps have been done, but I thought it might be better to cover it by his oral testimony, and it will be so covered.

Q. Calling your attention to the first building described in your Exhibit No. 1, as being located at Nos. 72 to 76 South High Street in the city of Akron, please explain in detail how you arrived at the value shown in your Exhibit for that building?

Mr. Burr: And I might say at this point that, inasmuch as we propose to shorten the testimony in so far as it is possible by referring to the buildings as having been appraised by one method or the other as the case may be, we would like to have the witness go into some detail with respect to this first building as being indicative of the method applied in all of the buildings in the same class as the one to which this Akron building No. 1 applies.

A. Please read the question.

(Question read.)

A. I had the plans and specifications for this building, from which I computed the quantities of labor and material needed to complete the building.

[fol. 1914] Q. Now, before you started your computation what did you do?

A. On this particular building I think I started the computation before I ever saw the building. During the course of all these different computations, I visited the building to identify the different parts of the structure. I am not sure, but I believe in this case I was about half way through with my computation when I made this visit to Akron. I then went over the building from basement to roof, inspecting the walls, the inside walls, the outside walls, the floors, plumbing, heating, electric wiring and outlets, different kinds of trim, inside and outside. In fact, everything that was visible. To acquaint myself with the condition of the building and to see that the building was built according to plans and specifications. During my visit in Akron to inspect this building I consulted with contractors and material people to get the prices on labor and material.

Q. Have the prices current where?

A. In Akron as of June 30th, 1925. From all this information I then computed the cost of this building, which is known as the first method I spoke of sometime ago.

Q. What construction would you apply to that building?

A. This building would be a commercial type of building, except that I found the foundations, walls, columns and floors of much more massive construction than is ordinarily found in commercial buildings. The building is fireproof in concrete, fireproof throughout, fireproof windows and doors used throughout the building. The building was primarily designed for telephone use. You could tell that by the excessive story heights, the distance from floor to floor.

[fol. 1915] Q. Why is that?

A. That was, as I understand, to give ventilation and also to allow for the installation of the telephone equipment.

Chairman Marshall: We will recess now until 1:30.

And thereupon a recess was had until 1:30 o'clock P. M. of same day.

[fol. 1916]

Tuesday Afternoon,
December 22nd, 1925,
1:30 o'clock.

And also Ernest L. Myers resuming the stand for further examination in chief, continued his testimony as follows:

Examined by Mr. Burr:

Q. When we adjourned for the noon recess I think we were talking about the so-called massive construction of the company's buildings, and you had answered something with reference to that sort of construction. In order to be as brief as possible, let me ask you the reason for this massive construction of the telephone company's buildings.

A. The reason as I found was on account of the excessive heavy loads caused by the equipment that was placed in all these buildings. The excessive floor heights or story heights was caused by the necessity of housing the standard equipment the building has, which is quite tall and would not fit in the ordinary story heights. The fireproofing, as I understood, was done for the safety of the employees, to make it fireproof, for the safety of the equipment, valuable equipment stored there, and for insurance purposes.

Q. Insuring what?

A. Insuring this equipment, and other insurance carried by the company, to bring a lower rate—fireproof construction.

[fol. 1917] Q. How about the insurance of continuous service?

A. That, of course, would become necessary to keep the telephones in working condition all the time—would not be stopped on account of fire.

Q. When you speak of standardized equipment, to what do you refer?

A. The telephone equipment. I believe they are called racks and terminal rooms, switchboards and things like that, that was standardized. The same size and type are used in all the exchange buildings.

Q. Have you with you the plans and specifications for this Akron Building No. 1 about which you have been talking?

A. I have.

Q. Is that large suitcase before you filled with those plans and specifications?

A. Mostly for this one building alone. I have all of these other plans and specifications in Cleveland, on which I computed the values of these different buildings. To bring those here would take several trunks.

Q. How many pages of specifications are there for this one building?

A. A hundred, approximately 125 pages, for this one building alone, of specifications.

Q. In addition to that you have a pile four or five inches high of other figures for that building?

A. I have, plans and so forth.

Q. In addition to that there are the plans?

A. Yes.

Mr. Burr: We do not care to offer them in evidence unless the Commission wants a set of plans and specifications to go into the record.

[fol. 1918] Commissioner Maullar: No.

Mr. Burr: Or unless opposing counsel want it.

Mr. McConnaughey: We can — access to it, of course?

Mr. Burr: Yes, they are all available.

The Witness: They are all available in Cleveland.

Commissioner Maullar: I don't think you want to encumber the record with all of that, if they are available.

Q. Now, when you took up this matter of appraising the Akron Building No. 1, what did you do with these plans, and following that, will you tell the Commission what you did in order to arrive at the reproduction cost new of this building, taking it step by step from the beginning to your final determination?

A. Yes, sir. I took the plans and specifications and identified them with that work which is now in the building. After the identification had been made I then started to compute quantities of labor and material represented in this building. I first started in the excavation to the bottom of the foundations. I next took the excavation around the columns and walls, trench excavation we call it. The next item I computed was the sheeting, piling, and the shoring around the buildings, to protect the property from save-ins and other buildings from falling in, and protection of pedestrians and traffic going by the side. After that I computed the masonry, such as the trim, brick and tile, and then the reinforced concrete and the plain concrete, special concrete work as stairs. Main stack for the building for the heating and ventilating work. I then went on to the cement work and the waterproofing, and then the carpentry, which in-

[fol. 1919] cluded all of the woodwork in the building, and the hardware and glazing, the roofing, sheet metal, and then

the fireproof windows and doors, structural steel work, ornamental iron works, then the lath and plaster and painting, then the hard stone trim, such as marble, tile, terazza and so on, and then the plumbing, the heating, electric wiring and fixtures, and finally on this first list of items I figured the cost of the field administration.

Q. In figuring the cost of this building and the cost of all the other buildings which you appraised which are covered by your Exhibit No. 1, what prices or costs for labor and materials did you use?

A. I used those prices which were prevalent for labor and material in Akron on or about June 30th, 1925.

Q. Now, that is for the Akron Building; but what did you do in case of each building?

A. In their localities?

Q. Yes.

A. I always took the prices on labor and material prevalent in that district in which the building was figured or located.

Q. Now, going back to the Akron Building again, you have stated that you computed the costs of all of the different kinds of labor and materials going into the building. I will ask you what all those costs added together constitute in the contracting business?

A. These different items that I have mentioned before, down to and including the field administration, include what a contractor calls and what I consider the contractor's cost of a building.

Q. That is, the contractor's cost price?

A. Yes.

[fol. 1920] Q. Now, that represents the actual cost of the building inclusive of what costs?

A. Inclusive of all of the items that I have mentioned before.

Q. What other costs did you add in order to arrive at the reproduction cost new of the building?

A. I added five other items, namely, overhead and profit for the contractor, the cost of insurance, the cost of the surety bond, the architect's fee, and the cost of the architect's supervision during the construction of the building.

Q. To what extent are those customary costs entering into the cost of buildings such as those you have appraised?

A. These costs and charges are always included in a contractor's bid, with the exception of the architect's fee and the superintendence. The overhead and the profit, the insurance and the surety bond are always included in the cost of the building or in the price of the bid to the owner.

Q. What amount in percentage do you add to the contractor's cost price in order to arrive at the contractor's overhead and profit?

A. I added eight per cent, eight per cent of the contractor's cost to make the amount set aside for overhead of the general office and profit to the contractor for his work.

Q. Why did you apply eight percent?

A. When I first started to appraise these buildings I was told that I should be ready by the middle of June, and in order to have a price on all of these buildings, I knew I would not be able to go into it all thoroughly by that time. So the first buildings that I estimated or priced or computed, I put prices on that I thought would be fair. Ordi- [fol. 1921] narily this percentage for overhead and profit is about ten per cent. Ten per cent is generally used, whether it is a contract price or whether it is a cost plus a fixed sum price or cost plus a percentage profit price. When I put eight per cent on I thought that would appeal to anybody on the other side of the case if they felt like going into the appraisal.

Q. With reference to the item of insurance already referred to, how did you arrive at the amount which you computed as representing the insurance cost of the building?

A. Contractors generally compute their insurance on a certain percentage of their actual computed payroll. This insurance was computed at $7.00 per $100.00 of payroll.

Q. Why?

A. Why that has been found to be a conservative percentage of the payroll, public liability, state compensation insurance, fire insurance, tornado insurance, payroll insurance. In fact, any insurance that a contractor generally takes out when he goes on the job.

Q. How does it compare with the amount used by contractors generally for that purpose?

A. It is somewhat lower than some and possibly higher than others, but I took seven per cent as a fair average for the state as a whole.

Q. What about the cost of the bond, the contractor's bond?

A. The cost of the contractor's bond was figured at $15.00 per $1000.00, which is a standard rate and has been for some time.

Q. Per thousand dollars of what?

A. Per thousand dollars of bid.

Chairman Marshall: Do I understand you to say you took [fol. 1922] seven per cent of each $100.00 of the payroll?

A. Yes.

The Witness: Yes.

Chairman Marshall: Why do you base it on the payroll of the contractor rather than the value of the property?

The Witness: Because we pay our state compensation on the payroll. The rate we pay for carpenters, bricklayers, steel setters, all those fellows, is based on the actual payroll of all that class of labor used on the building. Fire insurance, of course, is on the value of the property. Also payroll insurance is based on the payroll.

Q. Now, the largest item of this insurance is represented by liability insurance, isn't it, that is to say workmen's compensation, is it not?

A. Yes, sir, it is.

Q. That insurance is based on the payroll and the number of men?

A. And their different occupations also.

Q. As of what date was the cost of the insurance $7.00 for each $100.00?

A. All of these different percentages and costs, such as overhead and profit, insurance and bonds, were figured out about June 30th, 1925.

Q. What have you to say with respect to the architect's fee and architect's supervision?

A. On some of these buildings I have figured the architect's fee would run considerably over this per cent, as he could not afford to handle the job at that rate. On some of the buildings it is possible it would be a small bit.

Q. Under what?

A. Six per cent. I took the figure of six per cent and used it throughout the state appraisal for every building that was appraised, figuring that that would be a conservative percentage to use. The same way with the architect's

[fol. 1923] supervision at one and one half per cent. He could not afford to do that work at that percentage on many of the buildings I appraised, but I figured that the average would be fair.

Q. At what amount?

A. One and one half per cent.

Q. To what extent do these costs that you have referred to represent your judgment in this matter?

A. These costs on this Akron building No. 1, also every other building that I have appraised, represent my best judgment as to the cost of any of these buildings, any and all of them, as of June 30th, 1925.

Q. Now, you have stated that you have used three methods in appraising the buildings, and I think you stated with respect to Akron building No. 1 you used the first method, that is to say, the method by which you applied to the plans and specifications the proper unit costs for the materials and labor; is that correct?

A. Yes, sir, I did.

Q. Now, in order to arrive at the cost of that building as well as the cost of all of the other buildings appraised by either the first or the second method, how did you divide up, if at all, the classes of work represented in the building?

A. As I have before stated, I divided this work into the classes which I will name again——

Q. You need not name them again if they are set up in your Exhibit, which may be marked for identification Myers' Exhibit No. 2. Have you such an Exhibit?

A. I have.

And thereupon the paper writing above referred to was marked for the purposes of identification as Myers' Ex-[fol. 1924] hibit No. 2.

Q. Does the first page of that Exhibit show the general classes of the work involved in Akron Building No. 1?

A. Yes, sir, they do.

Q. What do the subsequent sheets, that is to say, No. 2, 3, 4 and 5, of your Exhibit No. 2, represent?

A. These sheets, Nos. 2 and 3 and 4 and 5, represent the compilation of figures, which give us the prices under the column "cost" on sheet No. 1. For instance, on sheet No. 2 of Exhibit 1, the excavation, the general excavation, under amount for quantity column, I have 3,100 cubic yards.

Under the unit cost column I have a price of $1.50 per cubic yard.

Q. Where did you get that price?

A. That price was a prevailing price around Akron for that type of excavation as of June 30th, 1925.

Q. What have you to say with reference to all the unit costs used on this building and the other buildings appraised by you?

A. They also were prevailing prices as of that date, June 30th, 1925.

Q. Where?

A. In the different districts where the different buildings were located.

Q. Now proceed.

A. Under the third column of figures we give the amount of money that that general excavation cost the contractor, $4,650.00. I next take the trench excavation, which, at 1,279 cubic yards, at a unit price of $2.00 per cubic yard, gives me a price of $2,560.00 for the trench excavation, the cost of that work to the contractor. I went on down through the brick and tile and concrete work, so on down as they are [fol. 1925] listed on sheet No. 1, which are just the results of this compilation of figures.

Q. And the same considerations apply to the other buildings appraised by you?

A. Yes, sir, they do, every building that was appraised by the first method.

Q. How did those appraised by the second method differ from those appraised by the first method?

A. After I made a visit to the buildings under the second method and took notes as to the labor and material in the building, took the dimensions of the building, came back to my office, from then on that appraisal was made the same as method No. 1.

Q. In other words, in the first method you had already available the plans and specifications and in the second method you practically made plans and specifications?

A. Yes, sir.

Q. But in other respects, the appraisal was done in the same way with respect to one as the other?

A. Yes, sir.

Q. Tell the Commission whether or not your Exhibit No.

2 is typical of the method followed by you with respect to the other buildings?

A. Exhibit No. 2 is typical of the method followed by me in every respect for these other buildings which were appraised under the No. 1 method.

Q. What about No. 2?

A. And No. 2, with the exception of the plans and specifications, was done in the same way.

Mr. Burr: We offer Myers' Exhibit No. 2 in evidence.

[fol. 1926] Chairman Marshall: It may be admitted.

And thereupon the paper writing above referred to was offered and admitted in evidence on behalf of the Ohio Bell Telephone Company, and is herewith submitted, marked Myers' Exhibit No. 2 and made a part hereof.

Q. What in your judgment was the reproduction cost new of that Akron Building No. 1 as of June 30th, 1925?

A. The reproduction cost new of building No. 1, Akron, Ohio as of June 30th, 1925, was $287,852.00.

Q. What, if anything, do you find present in the case of the various buildings but which is not included or which are not included in your appraised value of the buildings?

A. I did not appraise such items as permanent fences, sidewalks, awnings, screens, landscaping, grading around the premises.

Q. Drives?

A. Slag drives, concrete drives.

Q. Shrubbery?

A. Yes, I mentioned that in landscaping.

Q. Do you find any of those items present in the case of the buildings that you appraised?

A. I found after inspection that these items were all present, taking the buildings in Ohio as a whole. Some in some buildings, others in other buildings. But these items are not generally specified in building plans and specifications, so I did not attempt to put a price on them. It probably looks better to carry that account under some *under* heading.

Q. For example?

[fol. 1927] A. Oh, omissions, or anything you want to call it.

Q. They did and do represent items of value, don't they?

A. Oh yes, they are generally put in by the owner after the contractor, the building contractor, gets off of the job.

Q. Now, the next building shown in Exhibit No. 1 is the commercial office building at Akron. What in your judgment was the fair reproduction cost or value of that building as of June 30, 1925?

A. In my best judgment the cost of reproduction of building at No. 82-84 South High, Akron, as of June 30th, 1925 would be $62,640.00. Based on the same method of pricing, same method of computing the quantities of labor and material as was used in building No. 1, and in fact was used in every building in the state where plans and specifications were available.

Q. Did you in any case use as the appraised value of the building the actual cost to the company as shown by its books?

A. In some few cases I did, possibly four cases; there were four cases out of the 95 buildings that I appraised.

Q. Why do you use that cost?

A. Plans and specifications were not available. This property was not owned by the company—simply additions that were put in by the company, and which was the only method by which I could get the fair value, and these were all made up so recently that I thought it was fair to use the price for this appraisal.

Q. When you say the property was not owned by the company, do you mean the property which you appraised was not owned by the company?

A. 95 buildings that I appraised were owned and operated by the company. Four buildings are leased by the company [fol. 1928] as I understand.

Q. You did not appraise the value of those leased buildings, did you?

A. I did not.

Q. What did you appraise with respect to those buildings?

A. I appraised the equipment—equipment is not the right word, but additions that were made by the Ohio Bell Telephone Company to those buildings, such as heating, new partitions, glass, painting, plumbing.

Q. Who owns those additions? Whose property were they?

A. I believe that is the Ohio Bell Telephone Company property.

Mr. McConnaughey: The lease would determine that, wouldn't it?

Q. What method did you follow in appraising the property known as building No. 1 at Alliance in your Exhibit?

A. Building No. 1 at Alliance was appraised by this method I told you, that of taking the actual book costs to the Ohio Bell Telephone Company in Cleveland.

Q. That was why?

A. Because no other fair method presented itself to me to get the actual valuation of that work.

Q. What kind of property was it?

A. Beg pardon?

Q. What kind of property was it? That was for equipment, wasn't it?

A. Yes, for equipment.

Q. Who owned the building?

A. The Ohio Bell Company did not own the building. I don't know who does own it.

Q. Who- method was followed in your appraisal of building No. 1, located at Barberton; when I refer to them as [fol. 1929] building No. 1 or 2 that also refers to the numbering of the buildings in your Exhibit No. 1?

A. I followed exactly the same method to compute building known as No. 1 in Barberton, Ohio as I did for building No. 1 in Akron, Ohio, that of computing quantities of labor and material from the plans and specifications, pricing it by prevailing prices as of June 30th, 1925.

Q. That is what you call the first method?

A. Yes.

Q. What in your judgment was the reproduction cost new of that building as of June 30th, 1925?

A. $14,823.00, was in my best judgment the reproduction cost new as of June 30th, 1925.

Q. What method did you use in appraising the following buildings mentioned in your Exhibit No. 1: Bellaire building No. 1; Berea No. 1; Canton Numbers 1, 2 and 3 and Cleveland Numbers 1, 2, 3, 4, 5, 6, 7 and 8?

A. I used the first method, as I did in the case of Akron Building No. 1.

Q. What is your best judgment as to the reproduction cost new of those buildings respectively as of June 30th 1925?

A. Reproduction cost new for the following buildings as of June 30th, 1925, is as follows:

For Bellaire, Ohio $27,700.00; Berea, Ohio, $15,163.00; Canton, Ohio, building No. 1, known as Hemlock, $46,503.00; building No. 2, known as McKinley exchange, $40,016.00; building No. 3, known as the new Canton main, $227,505.00.

Cleveland building No. 1, known as Broadway exchange, $70,500.00; Cleveland building No. 2, known as Randolph exchange, $148,000.00; Cleveland building No. 3, known as [fol. 1930] the Glenville and Eddy exchange, $398,410.00; building No. 4, known as Main and Cherry exchange, $719,315.00; building No. 5, known as Prospect exchange, $112,999.00; building No. 6, known as Hemlock exchange, $73,143.00; building No. 7, known as Lincoln exchange, $77,168.00; building No. 8, known as Garfield exchange, $240,986.00.

Q. What method was followed by you in appraising Cleveland buildings Numbers 9 and 10?

A. I used the method known as No. 3 on these two buildings, that of going to the site of the buildings, inspecting them and putting a price on the volume size of their contents.

Q. Based on what?

A. Based on knowledge of labor and material prices for similar buildings.

Mr. McConnaughey: Are you reading these answers from a prepared sheet there?

The Witness: No, sir, this is Exhibit No. 1.

Q. What in your judgment was the reproduction cost new of building No. 9 in Cleveland as of June 30th, 1925?

A. My best judgment as to the reproduction cost new, building No. 9, Cleveland, as of June 30th, 1925, was $1,250.00.

Q. Building No. 10 Cleveland?

A. Building No. 10, Cleveland, $140.00.

Mr. Burr: Now, with the consent of the Commission and counsel, we might be able to shorten the witness' testimony by propounding a single question to him and allowing him to go through with the remainder of the buildings, describing the buildings by number, so that they may be identified with the buildings as listed in the Exhibit, stating [fol. 1931] the method by which you appraised the buildings and the reproduction cost new of the buildings as of June

30th, 1925. If that is satisfactory, you may proceed with that, Mr. Myers, starting with Cleveland building No. 12, going right through the list of those appraised by you, describing first the building, then the method, then the amount which represents your best judgment of the cost of reproduction new as of June 30th, 1925.

Mr. McConnaughey: Why can't you shorten it more by asking him to point out the few he has priced by the cubic contents.

Mr. Burr: We don't get the benefit of the fact that these prices will be his judgment as to each.

Mr. McConnaughey: Let him testify that the Exhibit shows his judgment.

Mr. Burr: I wonder if we will make time any more that way than by having him go right through?

Mr. McConnaughey: If there is anything especially to say, you can do that.

Q. You may proceed, Mr. Myers.

A. As I before stated, all of these prices are based on the prices of labor and material as of June 30th, 1925.

Q. By prices do you mean your reproduction cost new?

A. Your reproduction cost new as of June 30th, 1925. I will now read these different buildings by their numbers and give them the method and give the price. Building No. 11, Cleveland, known as the Fairmont Exchange, price $202,468.00.

[fol. 1932] Q. When you say price what do you mean?

A. The value or reproduction cost new.

Q. Yes.

A. It was computed by the first method. Building No. 12—

Q. What is the amount?

A. $202,468.00.

Q. Go ahead.

A. Building No. 12, Cleveland, known as Lakewood exchange, figured by the first method, reproduction cost new is $160,980.00.

Building No. 13, Cleveland, known as Superior exchange, was figured by the first method and has a reproduction cost new of $1,096,963.00.

Building No. 14, Cleveland, used for garage purposes, was figured by the second method and has a reproduction cost new of $9,723.00.

Building No. 15, Cleveland, used for garage purposes was

figured by the second method, and has a reproduction cost new of $17,582.00.

Building No. 16, Cleveland, known as the Princeton and Pennsylvania exchange, figured by the first method, has a reproduction cost new of $81,190.00.

Building No. 17, Cleveland, known as the Academy Exchange, was figured by the second method and has a reproduction cost new of $31,700.00.

Building No. 18, Cleveland, known as Melrose Exchange, was figured by the first method, and has a reproduction cost new of $49,165.00.

Building No. 19, Cleveland, is in rented quarters and was figured from the actual book values of the Ohio Bell Tele- [fol. 1933] phone Company at a reproduction cost new of $3,700.00.

Q. What sort of property is covered by your appraisal in that case?

A. Heating plant.

Q. All right, go ahead.

A. Building No. 20, Cleveland, known as Cliffside Exchange, was figured by the first method at a reproduction cost new of $189,465.00.

Building No. 1 at Columbus, known as Franklin exchange, was figured by the first method and has a reproduction cost new of $78,940.00.

Building No. 2 of Columbus, known as Hilltop exchange was figured by the first method and has a reproduction cost new of $74,691.00.

Building No. 3 of Columbus, known as North exchange was figured by the first method and has a reproduction cost new of $103,618.00.

Building No. 4 of Columbus, known as the main Bell central office, was figured by the first method, has a reproduction cost new of $406,320.00.

Building No. 5, Columbus, known as the Garfield exchange, was figured by the first method and has a reproduction cost new value of $71,280.00.

Building No. 6, of Columbus, known as the Adams exchange was figured by the first method and has a reproduction cost new value of $363,100.00.

Building No. 7, of Columbus, known as the main state central office, figured by the first method has a reproduction cost new value of $231,700.00.

Building No. 8, of Columbus, known as the Fifth Avenue

[fol. 1934] Exchange, was figured by the third method, has a reproduction cost new of $13,200.00.

Building No. 9 of Columbus, known as the Blake exchange figured by the first method, has a reproduction cost new value of $3,920.00.

Building No. 10, of Columbus, known as Indianola exchange, was figured by the first method, and has a reproduction cost new value of $6,697.00.

Building No. 11, Columbus, known as Hawthorne exchange, figured by the first method and has a reproduction cost new value of $3,920.00.

Building No. 12, Columbus, known as Mooberry exchange, was figured by the first method, and has a reproduction cost new value of $6,785.00.

Building No. 13, Columbus, known as Franklin Park Exchange, was figured by the first method and has a reproduction cost value new of $15,030.00.

Building No. 14, Columbus, known as Hanford exchange, figured by the first method has a reproduction cost new value of $3,920.00.

Building No. 15, Columbus, known as Clintonville exchange, was figured by the first method, has a reproduction cost new value of $6,426.00.

Building No. 16, Columbus, known as Arlington exchange, was figured by the first method, and had a reproduction cost new value of $3,580.00.

Building No. 1, of Dayton, known as the main exchange, was figured by the first method and has a reproduction cost [fol. 1935] new value of $90,099.00.

Building No. 2 of Dayton, known as East Exchange, was figured by the first method and has a reproduction cost new value of $54,634.00.

Building No. 3 of Dayton, known as the Lincoln exchange, was figured by the first method and has a reproduction cost new value of $75,372.00.

Building No. 4 of Dayton, known as Garfield exchange, was figured by the first method and has a reproduction cost new value of $198,055.00.

Building No. 1 of East Liverpool, Ohio was figured by the first method and has a reproduction cost new value of $62,294.00.

Building No. 1 of Findlay, Ohio, figured by the first method has a reproduction cost new value of $65,993.00.

Building No. 1 of Gallipolis, Ohio, was figured by the first method and had a reproduction cost new value of $19,500.00.

Building No. 1, Marietta, Ohio, was figured by the first method and has a reproduction cost new value of $52,236.00.

Building No. 1, of Martins Ferry, Ohio, was figured by the first method and has a reproduction cost new value of $10,545.00.

Building No. 1, of Massillon, Ohio was figured by the first method and has a reproduction cost new value of $96,255.00.

Building No. 1, of Middletown, Ohio was figured by the first method and has a reproduction value new of [fol. 1936] $29,173.00.

Building No. 1, New Carlisle, Ohio, figured by the third method, reproduction cost new value $3,450.00.

Building No. 2 of New Carlisle, Ohio was figured by the third method and has a reproduction cost new value of $300.00.

Building No. 1 of North Jackson, Ohio was figured by the third method and has a reproduction cost new value of $2,050.00.

Building No. 1, Painesville, Ohio, figured by the first method, has a reproduction cost new value of $17,342.00.

Building No. 2, Painesville, Ohio, was figured by the second method and has a reproduction cost new value of $1,955.00.

Building No. 1, Piqua, Ohio, was figured by the first method and has a reproduction cost new value of $39,925.00.

Building No. 1, of Sandusky, Ohio, was figured by the first method and has a reproduction cost new value of $51,199.00.

Building No. 2, of Sandusky, Ohio, figured by the first method has a reproduction cost new value of $3,330.00.

Mr. McConnaughey: There is no parcel No. 2 at Sandusky in the inventory and no parcel No. 2 at New Carlisle.

Mr. Williams: Are you talking about land, Mac?

Mr. McConnaughey: No, that is land. That is right.

The Witness: Building No. 1, South Euclid, Ohio, was [fol. 1937] figured by method No. 3 and has a reproduction cost new value of $5,000.00.

Building No. 2 of South Euclid, Ohio was figured by method No. 3 and has a reproduction cost new value of $430.00.

Building No. 1 of Springfield, Ohio was figured by the second method and has a reproduction cost value new of $51,177.00.

Building No. 2, Springfield, Ohio was figured by the first method and has a reproduction value new of $48,218.00.

Building No. 3, Springfield, Ohio was figured by the second method and has a reproduction cost new value of $2,950.00.

Building No. 1, St. Clairsville, Ohio, figured by method No. 3, has a reproduction cost new value of $6,100.

Building No. 1, Steubenville, Ohio, figured by the first method, has a reproduction cost new value of $49,001.00.

Building No. 2, Steubenville, figured by method No. 2, and has a reproduction cost new value of $4,040.00.

Building No. 1 of Toledo, Ohio——

Mr. Dotson: Will you please give the exchange in those cases?

The Witness: Building No. 1 of Toledo, Ohio, known as Collingwood exchange, was figured by the first method and has a reproduction cost new value of $53,175.00.

Building No. 2, of Toledo, known as Navarre Exchange [fol. 1938] was figured by the first method and has a reproduction cost new value of $73,385.00.

Building No. 3, of Toledo, known as Forest exchange, figured by the first method and has a reproduction new value of $77,661.00.

Building No. 4, of Toledo, known as Pontiac Exchange was figured by the first method and has a reproduction cost new value of $21,915.00.

Building No. 5, of Toledo, known as Main State Exchange was figured by the first method and has a reproduction cost new value of $136,250.00.

Building No. 6, of Toledo, known as the Garfield exchange, was figured by the first method, and has a reproduction cost new value of $54,330.00.

Building No. 7, of Toledo, known as Walbridge exchange, figured by the first method, reproduction new value, of $45,081.00.

Building No. 8, at Toledo, located at 1726 Arlington Street, was figured by the third method and has a reproduction cost new value of $67,500.00.

Building No. 9, at 240 Vance Street, Toledo, Ohio, in

rented quarters was figured from book value, as to the cost of the heating plant, plumbing, painting and partition work, reproduction cost new of $2,050.00.

Building No. 1, of Uniontown, Ohio, known as the main exchange, was figured by the third method and has a reproduction cost new of $6,100.00.

Building No. 1, of Upper Sandusky, Ohio, known as the [fol. 1939] central office, was figured by taking the book value for the miscellaneous changes in building equipment and has a reproduction cost new value of $1,302.00.

Building No. 1 of Wickliffe, Ohio, known as the main exchange, was figured by the first method and has a reproduction cost new value of $9,176.00.

Building No. 2 of Wickliffe, Ohio, was figured by the second method and has a reproduction cost new value of $955.00.

Building No. 1 of Youngstown, known as the Garfield exchange, was figured by the first method and has a reproduction cost new value of $156,630.00.

Building No. 2 of Youngstown, known as the Randolph exchange, was figured by the first method and has a reproduction cost new value of $97,919.00.

Building No. 3, Youngstown, known as the South exchange, was figured by the first method and had a reproduction new value of $6,130.00.

Building No. 4, Youngstown, known as West Exchange was figured by the first method and has a reproduction cost new value of $8,080.00.

Building No. 1, Zanesville, Ohio, known as the Main Exchange was figured by method No. 1 and has a reproduction new value of $78,569.00.

Q. When you have referred in your previous answers to the reproduction cost new of any of these buildings, to arrive at that reproduction cost new whose judgment does it represent in each case?

A. It represents my judgment in each case as to the [fol. 1940] reproduction cost new value as of June 30th, 1923.

Q. And computed by whom?

A. Computed by myself.

Q. Do any of these reproduction cost new values which you have given for the various buildings include such items as sidewalks, drives, permanent fences or landscapes?

A. No sir, they do not.

Q. Where you refer to book values whose book values are they?

A. By that term I mean the book value of the Ohio Bell Telephone Company.

Q. As shown by what?

A. As shown by their books, their records in Cleveland.

Q. In order to cover any possible omission in my questions heretofore propounded, will you please state to the Commission whether or not the values stated in your Exhibit No. 1 for the various buildings of the Ohio Bell Telephone Company there enumerated represents in your judgment the reproduction cost new of the various buildings respectively as itemized in the Exhibit?

A. Yes, sir, they do represent my best judgment as to the reproduction cost new as of June 30th, 1925.

Mr. Burr: We offer Myers' Exhibit No. 1 in evidence.

And thereupon the paper writing above referred to was admitted in evidence on behalf of the Ohio Bell Telephone Company and is herewith submitted, marked Myer's Exhibit No. 1 and made a part hereof.

[fol. 1941] Mr. Burr: I will now offer Myers' Exhibit No. 2 in evidence in order to be sure that it has been offered.

And thereupon the paper writing above referred to was offered and admitted in evidence on behalf of the Ohio Bell Telephone Company and is herewith submitted, marked Myers' Exhibit No. 2 and made a part hereof.

Q. My attention has been called to one possible omission that it might be well to point out specifically which occurred in the early part of your testimony as to the value of property. I refer to parcel No. 1 at Alliance, which I believe you did not give the reproduction cost new for.

A. The reproduction cost new, miscellaneous building equipment in the quarters occupied by the Ohio Bell Telephone Company at Alliance, Ohio, is $6,377.00. This value was take from the books of the company, the Ohio Bell Telephone Company, in Cleveland, Ohio.

Mr. Burr: That is all for the present, Mr. Myers. Mr. Schneider may take the stand. However, first, let the record show for the benefit of anyone examining these and in order

to obviate the necessity of going through the Exhibits, that the total reproduction cost new of the buildings covered by Mr. Myers' appraisal is $7,788,744.00.

[fol. 1942] And also WALTER G. SCHNEIDER, called as a witness on behalf of the Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Mr. Schneider, you have heretofore testified in this case?

A. Yes, sir.

Q. With respect to certain routines and also with respect to certain general items of costs covered by Mr. Williams' inventory or items of expense covered by Mr. Williams' inventory?

A. Yes, sir.

Q. Your testimony commences at page 125 of the record. Will you tell the Commission to what extent your testimony previously given in this cause applies to the 1925 inventory offered in evidence here this morning?

A. I have reviewed my testimony of January this year relative to the June, 1924 inventory. I have also reviewed the inventory of the company as submitted by Mr. Williams this morning. And I find that my testimony as given at that time applies directly in all respects to the inventory as filed today.

Mr. Burr: That is all for the present. That is all we have to offer at this hearing.

Commissioner Maullar: Do you have any cross examination at this time?

Mr. McConnaughey: I think we better wait until they have concluded their testimony.

Chairman Marshall: Let the record show at this time that this case is continued until nine o'clock, central standard [fol. 1943] time Tuesday, January 12th, 1926, and we will take at that time two days, the 12th and 13th, and then on Wednesday January 27th, Thursday the 28th and Friday the 29th and February 11th and 12th and February 25th and 26th, we will proceed with this telephone case. We want you all to be ready, because we are going to hear it.

And thereupon the further hearing of this matter was adjourned to Tuesday Morning, January 12th, 1926, at 10:00 o'clock.

[fol. 1944] Tuesday Morning Session,

January 12, 1926.

And thereupon the further hearing of this matter was resumed pursuant to adjournment.

Chairman Marshall: All right, gentlemen, you may proceed.

Mr. Burr: Mr. Williams may take the stand.

And also GEORGE B. WILLIAMS, resuming the stand, for further direct examination, continued his testimony as follows:

Examined by Mr. Burr:

Q. During the recent hearing, Mr. Williams, it was suggested that you prepare an exhibit showing the corresponding page numbers in Williams Exhibit 3-A and B on the one hand as compared with Williams Exhibit 5-A, B and C, on the other; have you prepared such a statement?

A. Yes, sir, I have.

Mr. Burr: It may be marked for identification Williams Exhibit 5-D and is offered in evidence.

And thereupon the paper writing so last above offered is introduced and admitted in evidence on behalf of the Ohio Bell Telephone Company and is herewith submitted marked [fol. 1945] Williams' Exhibit 5-D and made a part hereof.

Commissioner Poor: Call that 5-G?

Mr. Burr: Yes. It was agreed, Your Honor, at the last hearing, that it should be so marked.

Q. It was also suggested at that time that a statement be prepared showing the affidavit numbers with respect to land in Williams' Exhibit Number 6, and the corresponding page and parcel numbers in Williams Exhibit 5-A. Have you prepared such a statement?

A. I have.

Mr. Burr: It may be marked for identification Williams' Exhibit 6-A and is offered in evidence, that being the number by which it was agreed that the exhibit should be marked at the last hearing.

And thereupon the paper writing so last above offered is intrduced and admitted in evidence on behalf of the Ohio Bell Telephone Company and is herewith submitted marked Williams Exhibit 6-A and made a part hereof.

Q. At the hearing on March 10, 1925 in this case, you were asked with regard to the field check of the inventories which were the basis for the inventory then under discussion; that is to say the so-called 1924 inventory. What field checks, if any, have you made of the property covered by your 1924 inventory and your 1925 inventory as well, since that date; that is to say since March 10, 1925?

A. Having completed inventories on all of our properties [fol. 1946] as of about that time, we started a routine of check for the quantities of property in each exchange in order to check partly our record of maintenance and keep them corrected up to date, and partly to check our map records. During the time subsequent to February or March, 1925, we took advantage of the time between those hearing dates and the last ones to check about I should say 85 per cent of our exchange property. That was in order partly to verify the plant measurements, that went into our inventory, but principally to be certain that we could furnish to the State copies of field maps for any check that they would desire to make.

Q. To what extent is that field check or those field checks reflected in your 1925 inventory?

A. They are reflected entirely in the 1925 inventory.

Q. What new inventory made since the 1924 inventory of any particular exchange property is now included in the 1925 inventory?

A. As I testified in February and March of 1925, we were at that time engaged in making a new inventory of the Cleveland property, the inventory included in the 1924 inventory having been taken several years previously. That was finished prior to June 30, 1925 and the results were included in the 1925 inventory.

Q. Referring to the appraisal with respect to which you will shortly testify and preliminary to your testimony on that subject, will you please call attention to any minor

changes or differences between the property as listed in your appraisal and as listed in the 1925 inventory?

A. Every time you make a recheck of an inventory of this size we generally pick up some small items. We picked up [fol. 1947] some minor items in the central office, a couple of P. B. X.'s and a little joint conduit. I have not taken the trouble to identify this particularly in the inventory or in the appraisal because they are of small consequence and I am calling attention to them here because the State has not used the inventory; I would suggest that the appraisal be used instead because it is up to date exactly.

Q. And have you the data so that you can show to the State's engineers those small, minor differences?

A. Yes, we could go through that and pick them out from the information we have in the office.

Q. At pages 5 et seq., of a record in this case, being a part of the testimony taken on January 19, 1925, you referred to your experience in telephone inventorying and appraisal work down to that date; what, if any, further inventory and appraisal work have you done since then—that is since January 19, 1925?

A. I have been continuously engaged in inventory and appraisal work from that date until the present time, all, or nearly all of which has been in connection with this present case under consideration.

Q. You have already testified that you prepared in 1924 and 1925 inventories which are of record in this case; tell the Commission whether or not you have appraised the property of the Ohio Bell Telephone Company as listed in your 1925 inventory on the basis of its reproduction cost new as of a date certain?

A. I have.

Q. What date?

A. June 30, 1925.

Q. When referring to the 1925 inventory, you mean Williams' Exhibits 5-A, B and C, do you not?

[fol. 1948] A. That is correct.

Q. Tell, the Commission whether or not the three volumes which may be marked for identification Williams' Exhibits 7-A, B and C, show your appraisal of the property of the Ohio Bell Telephone Company as of June 30, 1925, and as inventoried in your 1925 inventory, Williams' Exhibit 5-A, B and C, with the exception of the two or three minor changes referred to in your previous testimony?

A. That is correct.

Q. To what extent does your Exhibit Number 7-A, B and C represent your judgment as to the reproduction cost new of the property of the Ohio Bell Telephone Company shown in the exhibit as of June 30, 1925?

A. It represents my best judgment of the conservative cost to reproduce new as of a date certain, namely, June 30, 1925 of the property of the Ohio Bell Telephone Company in the State of Ohio.

Mr. Burr: We offer Williams' Exhibits 7-A, B and C in evidence.

Chairman Marshall: It may be admitted.

And thereupon the exhibits so last above offered are introduced and admitted in evidence on behalf of the Ohio Bell Telephone Company and are herewith submitted marked Williams' Exhibits 7-A, 7-B and 7-C and made a part hereof.

Q. Calling your attention to Williams' Exhibit Number 7-A and particularly to the first numbered page, I wish you would discuss the item of the land, giving the source of your appraisal, the reason for using the amounts which you have for the company's land in the appraisal and if you were [fol. 1949] assisted in making the appraisal by anyone, tell the Commission who assisted you and why the persons who did assist you were chosen for that work?

A. On the first three pages of Williams' Exhibit 7-A are set up those parcels of land of which the company intends to dispose. They are listed under land, miscellaneous investments, account 111. Inasmuch——

Q. Just a moment, Mr. Williams. You are now referring to the paging as marked with a numbering machine, are you not?

A. That is correct, yes, sir.

Q. And prior to those pages which begin with page 1 and continue through to page 354 inclusive, there appear to be other pages bearing a stenciled number or numerals, 1 and 2; now you are not referring to those two pages now, are you?

A. No, those first two stenciled page numbers cover pages which had the index for the three volumes.

Q. Yes. Now, you may proceed?

A. Inasmuch as the company intended to dispose of the

parcels of land shown on pages at 1 to 3, I have used the original cost of the parcels of land and taken from the records of the company. These parcels of land or the total for them will be set up on a separate summary headed, "Summary of parcel property to be disposed of."

Coming next to pages 4 to 17 inclusive, I have listed the parcels of land which are either used or to be used by the company. These parcels of land are set up under the heading of "Land Account 211."

As I testified, in regard to Williams' Exhibit Number [fol. 1950] 6, the costs on these parcels of land, with certain exceptions, were obtained from real estate boards or real estate dealers in each of the towns.

Q. Each of what towns?

A. Wherein the parcels of land are located. The exceptions were on five parcels of land which owing to the recent date of purchase, I have used the original cost as taken from the records of the company. Those parcels, I think, I identified in my testimony in regard to Williams' Exhibit Number 6.

Q. Yes.

Mr. Burr: Mr. Dotson, would you like to have them identified again?

Mr. Dotson: No, personally I do not. They are identified, if I understand correctly, in the former testimony.

Mr. McConnaughey: I think so.

Mr. Dotson: Don't you understand so, Mr. McConnaughey?

Mr. McConnaughey: Yes, that is right, that is true.

Q. Proceed?

A. The total value or total cost to reproduce new as set up for the first division of land under miscellaneous investments as shown on page 3, being $63,796.00.

Q. You are now referring to the amount under Account Number 111?

A. That is right, sir.

Q. In passing, why have you used the account numbers 111 and 212?

A. Because that listing conforms to the listing in the system of accounts prescribed by the Interstate Commerce Commission and adopted by the Public Utility Commission [fol. 1951] of Ohio.

Q. To what extent does the same thing apply to the other account numbers in your appraisal?

A. We have followed the prescription of the Interstate Commerce Commission relative to the classification of accounts all the way through, both in the inventory and in the appraisal.

Q. Now, proceed if you please to discuss the land under Account 111?

A. 211.

Q. Number 211?

A. I have given the source of the value of these costs, of this amount, the total being shown on page 17 as $3,943,467.00, direct costs, exclusive of any construction overhead costs.

Shall I proceed with the buildings?

Q. What is the source of the reproduction cost new of the land shown in Accounts Number 111. Mr. Dotson has asked me for some further information about that?

A. The source of the costs set up for land, Account Number 111, is the original cost of the land as shown by the records of the company. I have used this cost as being sufficiently indicative of the cost, to reproduce, as of June 30, 1925, for the reason as I stated that these parcels of land are parcels of which the company intended to dispose.

I will also call attention in connection with the land in Account 211, particular- to page 10 of Williams' Exhibit 7-A, parcel Number 7 at Columbus, being located at 97 to 107 North Third Street. This is indicated at a leasehold. The appraised value of this particular parcel of land as made by the valuation Committee of the Columbus Real Estate Board and as shown in Williams' Exhibit Number [fol. 1952] 6, is $198,000.00. I have carried forward to Williams' Exhibit Number 7-A the amount of $123,000.00, for this particular parcel of land.

Q. Why?

A. The reason for that procedure was because the company has, or holds this particular parcel of land of lease under which they have a right to purchase in about two months from the present time and——

Q. Just a moment. Do you know that the company has declared its intention to purchase under the option?

A. That is my understanding, yes, sir.

Q. Proceed?

A. They have the right to purchase and obtain the fee ownership in this parcel of land, by the payment of $75,000.00?

A. It was my judgment then that the company's equity in this particular leasehold at the present time or as of June 30, 1925 was the total value of the land less the payment which you would be required to make in order to obtain the fee ownership.

Q. And for that reason you have reduced the appraisal of the land as furnished by the real estate appraisers by the sum of $75,000.00?

A. That is right. Now, that is the only deviation that I have made from the appraised values furnished by the valuation committees of real estate boards.

Q. How did you go about the selecti-n of the appraisers for the land?

A. We went to the appraisal committees of the Real Estate Boards, whose regular duty, among other things, it is to make valuations for various people and for various purposes, of parcels of land in the communities where these real estate boards were, and we asked those real [fol. 1953] estate committees to give us a fair value on each parcel of land owned by the company. They were not told what the purpose of the valuation was in any respect, with the exception that they were simply told that it was not for taxation purposes.

Q. I see. And what in your judgment is the fair value of the land shown in account 211 of your appraisal as of June 30, 1925.

Mr. Dotson: Just a moment.

Mr. McConnaughey. We object to that.

Chairman Marshall: What is the objection?

Mr. McConnaughey: He asks that Mr. Williams give his judgment as to these various valuations. Mr. Williams has not shown any basis of knowledge which would give his opinion any value whatever with reference to these values.

Chairman Marshall: Objection sustained.

Mr. Burr: • • •

Commissioner Poor: Off of the record. • • •

Chairman Marshall: We have adopted a new rule here, I may say, that we will not include the argument of counsel. • • •

Objection sustained; you may note exception.

Mr. Burr: Let the record show that the witness if permitted to answer would say $3,943,467.

Now, with respect to the ruling just made by the Commission that the argument of counsel or the statements of counsel with respect to questions and answers would not be permitted to be made a part of the record, I consider [fol. 1954] it my duty to insist that they be made a part of the record in exactly the same way as they would be if this were a proceeding in court. I do not want to antagonize the commission in this respect and I urge the point with the greatest amount of deference to the judgment of the Commission, but it seems to be very material that is what is said here in this room during the hearings with respect to the cost, touches the values; the remarks of counsel and the remarks of the Commission are quite as material to the record as is any other part and that they should be incorporated in the record and that the stenographer should so be instructed.

Chairman Marshall: The ruling has been made. We feel sure of our ground and it is going to consume much time and make a voluminous record and very costly without available funds, so you may note an exception.

Mr. Burr: Note our exception.

Mr. McConnaughey: I understand the ruling of the Commission does not cover any of the statements of counsel which are essential to the making up of the record?

Chairman Marshall: Oh, absolutely not.

Mr. McConnaughey: I mean arguments, and the rulings on the testimony.

Mr. Burr: That is the point. That is exactly one of the things that I have in mind in making this statement, who is to judge as to whether the remarks of counsel are material or not material, and is counsel to make a statement and then the question of its materiality be weighed and then——

Chairman Marshall: We do not want a big record made [fol. 1955] up here. We made a ruling on it.

Mr. Dotson: He has not got you right.

Mr. Burr: Note my exception.

Q. The next item, Mr. Williams is the item of buildings. Explain your method of separation as between accounts 111 and 212 with respect to how they are shown in your appraisals?

A. The classification of buildings is similar to that used for land in that I have set up under account Number 111 those buildings which are to be disposed of; and in this connection I have used as being sufficiently indicative of the cost to reproduce new as of June 30, 1925, for the buildings under Account 111, the original cost of those buildings as taken from the records of the company. As I stated, they were put on that basis for the reason that it is the intention of the company to dispose of these buildings.

Q. You are speaking with respect to those shown on Account 212?

A. I have just one or two remarks to make also yet on 111.

Q. Excuse me, I interrupted you.

A. In the first place I have carried the total for the 111 buildings amounting to $131,914.00 to this separate summary of the appraisal which will be headed "Property to be disposed of." These are the only two items carried to that separate summary that is the land listed under Account 111 and the buildings listed under Account 111.

Coming now to the second section of buildings, I have listed these buildings under Account 212, which is the — pro- [fol. 1956] vided in the Interstate system of accounts. These buildings appear on pages 23 to 43 inclusive and total as shown on page 43, $7,788,774.00.

Q. What does that amount represent?

A. That represents the cost to reproduce new as of June 30, 1925.

Q. In whose judgment?

A. In my judgment.

Q. Proceed?

A. These figures are adopted from Mr. Myers' appraisal of buildings put in in his Exhibit Number 1.

Mr. McConnaughey: We move that this statement of his judgment be stricken out.

Mr. Postle: Based on Myers' testimony.

Commissioner Poor: It will be sustained.

Mr. Burr: Note an exception.

Q. I think you have already said that with respect to the land shown in your appraisal, the amount there given for land is exclusive of overhead or indirect costs; that is correct, isn't it?

A. Yes, sir.

Q. What have you to say with respect to the amount stated in your appraisal for the buildings?

A. The amount stated in the appraisal for buildings is also exclusive of all overhead or construction overhead costs; and the same statement applies with equal force to all of the values for all items, for all accounts in all of the three volumes of Williams' Exhibit 7-A, 7-B and 7-C.

Q. Consider next if you please, the item of central office equipment indexed as Item Number 3 on page 1 of the index of your appraisal exhibit; explaining first if you please the [fol. 1957] difference between Item 3-A, central office equipment and 3-B, other equipment of central office.

A. First the central office equipment is found on pages 43-A to 354 inclusive.

43-A is the summary of the central office telephone equipment found on pages 44 to 324 inclusive and amounting to $16,956,131.00; and the other equipment of central office found on pages 325 to 354 inclusive.

Central office telephone equipment consists of the operating equipment of the central office and covers briefly such items as the switchboard and its equipment, the cables between the frames and the switchboard and the cable and wiring in the switchboard, the various relays, coils and other equipment of a like nature both in the switchboard and on the frames, the main distributing frames, intermediate distributing frames, coil racks and coils, relay racks and relays; power equipment, consisting of the power protection switchboards, batteries, power cables and feeds and items of a like nature.

The other, equipment of central office, with the exception of school boards, is dissimilar to central office telephone equipment, in that it consists of the furnishings of the operators' rest rooms, kitchens, and the restaurants, consisting of such items as chairs carpets, tables, linoleum, dishes, silverware and kindred items. The school board equipment, in other equipment in central office, is to a considerable extent similar to central office telephone equipment and is the equipment used for training operators [fol. 1958] before they go on to the regular board in their work.

Q. Consider next, if you please a few samples of central office equipment, explaining the meaning of the terms contained in Number 7-A. Take for example page 44, considering such items as Akron subscriber or Akron toll

or Alliance subscriber and tell what is generally meant by each of those terms?

A. The subscriber's board refers to that board where the connection is first made from a calling subscriber. We also have what are known as trunk or B boards where completion of calls are made from one office to another and to the calling subscriber. The toll equipment is——

Q. Just a moment. Are those boards referred to in the exhibit under the words, "Akron subscriber"?

A. They are.

Q. Now, proceed?

A. The toll equipment or toll boards consist of that equipment by which the connection is made originally, or terminated between towns and cities. It consists of the recording boards, the inward boards, the outward boards and the through boards.

Taking up for instance the Akron subscriber equipment listed on Page 44, the first item is the Number 1-C, 8 panel, 3 position, 9600 Western Electric subscribers' switchboard. This means that there are eight panels and three positions per section. The section equipment or the make-up of the section items consists of the iron frame work, the wood work, shelves, foot rail or foot shelf for the operators.

[fol. 1959] The next item listed is the cable turning section. This is the section of the switchboard wherein the cables or wires enter from below or above the floor line.

The next item is the end panel. An end panel is merely the woodwork at the end of a switchboard.

Angle sections are those sections of the switchboard wherein the line of direction changes.

The next item is subscribers' multiple, 29 sections. Subscribers' multiple consists of the multiple jacks and the multiple wiring between the jacks in the different sections.

The next item is subscribers' answering jacks. This consists of the jacks, intermediate distributing frame terminal and the line equipment consisting of the line relay, cutoff relay, line lamp and the wiring between these different items.

Q. Just a moment. Where you describe a particular item as you have been doing and following across the page, we encounter the word "each" or "lot", that means does it not, the unit which you have used in your appraisal?

A. Yes; that is the name by which we designate the unit.

Q. Yes.

A. Set up in that appraisal.

Q. What is meant by the corresponding number appearing under the head of "quantity" after each item.

A. Numbers after the heading of "quantity" are the number of units for each particular item of the line.

Q. Well, while we are on the subject, you might as well explain the corresponding figures in dollars and cents op-
[fol. 1960] posite each item appearing under the heading of unit costs on Page 44 for example?

A. On Page 44 under the heading of unit costs, we have set up the material value or cost only of each unit opposite the particular line in which it shows. The labor costs and the proper indirect costs associated with labor are all carried into the total for each particular board at the bottom of that board. For instance, on page 45 you will find the total for the material as being for the Akron Subscribers' board, and following that the proper costs in my judgment for the various associated indirect costs, which items will be discussed later.

Q. Now, then, bringing you back to Page 44 and calling your attention to the corresponding amounts under the heading marked "reproduction cost new" what is meant by the amounts in dollars and cents appearing in that column after each of the items?

A. For each item the amount appearing under head of "reproduction cost new" is the product of the quantities under the heading of "quantity" by the particular unit cost for that line or item under the head of "new cost".

Q. That is merely for the material?

A. That is for the material only on central office telephone equipment.

Q. On central office equipment?

A. Yes, sir.

Q. Will you describe briefly or continue briefly your description of the items shown under the heading of "subscriber" page 44?

A. Yes. The next item that I was about to discuss is rural multiple, which in a general way corresponds to subscribers' multiple. The same thing applies for rural an-
[fol. 1961] swering jacks.

The next item is outgoing trunks, 29 section. These are the trunks to the toll board, to the trunk board, to the wire chief's desk, the information desk, the chief operator's desk, the supervisor's desk and other desks.

Q. What is a trunk?

A. A trunk is a pair of wires with the associated trunk equipment of whatever relays are found in the particular trunk.

Q. Proceed?

A. Local and rural trunks, 29 sections, are the trunks to the rural position. Incoming trunk circuits for this particular board is in effect a trunk board function to this particular section in that they are indicating trunks to Akron from Cuyahoga Falls and Barberton.

Subscribers' positions cover the equipment associated with the subscribers' position, such as operators telephone circuits, ringing circuits, auxiliary signal circuits, peg count circuits, and call wire circuits between the subscribers' board and the trunk board.

The rural position equipment is similar to subscribers' position equipment.

Local switching positions are the positions for the incoming trunks that I just described about.

Subscribers cord circuits cover the equipment in the cord circuits in the subscribers cord and consist briefly of the cords, plugs, cord weights, cord hooks, cord fasteners in this board and repeating coil, supervisory relays, supervisors' lands, number 19-C resistances, and the wiring between these various items.

Rural cord circuits are generally speaking similar to the [fol. 1962] subscribers' cord circuits. Of course when I say they are similar, I mean by that that while there are differences between practically all circuits—there are many thousands of circuits—as a general proposition they have the same function and contain to a certain extent the same sort of equipment.

Trouble positions contain the operators' telephone circuit, the test circuit to the wire chief's desk and are for the purpose of receiving trouble reports and reporting to the wire chief.

Supervisor's telephone circuit for 10 divisions, 30 sections, contain the supervisory signal lamps in the top of the board and operators' telephone circuits, and the jacks for connection of the supervisor's telephone circuit.

Blank positions are positions that contain the framework and multiple only and have not yet been filled with equipment.

Q. What is the purpose of the blank positions, very briefly?

A. Why, they are to be filled up with the proper equipment as fast as subscribers are connected.

Q. Yes?

A. We have got to have a certain amount of surplus in that.

Plugging up positions are for the purpose of plugging up from the multiple to the wire chief's desk, lines, in case of trouble on those lines.

The equipment in the trunk board in a great many cases is similar to that in the subscribers' board and I will, in going over these items briefly, touch only on those items [fol. 1963] which are more or less dissimilar to the subscribers' board.

For instance, about the fourth or fifth item is indicated the item of outgoing trunks, nine sections. These are similar to the A board.

Down further we have the local switching positions. These are for the local incoming trunks.

Q. What do you mean by the local incoming trunks?

A. Those are local incoming trunks from Cuyahoga Falls and Barberton in this particular board.

Q. Then you have blank positions again; that is similar to what you have already described is it?

A. That is right.

Q. Proceed to the next page?

A. Now, in the next page, meaning Page 45, we have the item of peg count circuits. These circuits are for the purpose of making count of the calls over a given period for testing the load that the switchboard is carrying and they cover briefly wiring, relays and the peg count relays.

Q. Will you describe the purpose of the peg count, briefly, if you please? Reference is also made to it in the record several times, that is to say in the record in cases which have been consolidated with this case and I would like to have you explain it briefly if you please, so that we won't have to go over this case to pick out the various references to peg counts, as they appear there.

A. Well, the peg count circuits with the associated equipment are simply devices for a collection of equipment the purpose of which is to register the given number of calls over a given time in a particular board. These calls are [fol. 1964] registered by the operator as she makes a call

and the purpose as I say is to test the load that is being carried not only for the board as a whole, but also for a particular operator or a group of operators, in order to determine whether it is necessary to make a shift of the load from one operator to another.

An operating position may have in the beginning assigned to it a certain number of incoming subscribers' lines, and at the time that assignment is made, it may be the proper load that that operator can conveniently carry. Then, later, due to possibly a change in the type of community from which those particular lines originate—that is for instance a change from a practically 100 per cent residence community gradually to a partial business community the number of calls originating on a particular cable pair in-coming to a particular operating position may have grown to such an extent that that particular operator is overloaded.

It is necessary that these peg counts be made every so often among other purposes to test the load on an operating position so that if one position becomes overloaded, the proper switch or change can be made on the intermediate frame and a part of the load shifted to another operator, by shifting the incoming lines—some of our incoming lines, and assigning to this first operator some other incoming lines that are not so heavily loaded.

Q. Describe the busy back circuit?

A. The busy back circuits are for the purpose in the trunk board of notifying the calling subscriber when a [fol. 1965] called line is busy. The trunk operator has no means of cutting back to the calling subscriber and notifying that subscriber by word of mouth that the line which is called is busy, so that we have a certain number of jacks in that board associated with these busy back circuits, in which the B operator or the trunk operator places the plug which she would otherwise place in the jack associated with the line which is called and the placing of this plug in the busy back jack puts a busy tone on to the line and notifies the calling subscriber that that particular line is busy. That is the means by which this notification is given, inasmuch as the trunk operator cannot get back and notify by word of mouth the calling subscriber. In this circuit, we have the jack, certain relays, and a designation strip indicating the busy back jacks.

Q. Very briefly describe the night alarm circuit?

A. Night alarm circuits are connected with a great many of our circuits, not only in the trunk board, but in the subscribers board and various other places, the purpose of which is to notify the operator who fails to see a visible signal. The night alarm circuit generally takes off of the line relay with another relay and a night alarm lamp; also connected in this circuit there is a night alarm bell, which, if the operator fails to get the visible signal, the bell rings and gives an audible as well as a visible signal.

Emergency call circuits are for the purpose of establishing an auxiliary connection when a call wire fails. That is for instance between the subscribers board and the trunk [fol. 1966] board, we have what we call call wires, which the operators on the subscribers' board gets in immediate contact with the trunk subscribers head set and notifies the trunk subscriber that she desires to call a certain party, giving the number. The trunk subscriber assigns a line, a trunk line to put up this connection.

Q. You mean the trunk operator?

Mr. McConnaughey: You mean the trunk subscriber?

The Witness: I beg your pardon, the trunk operator assigns the line or trunk over which this connection is to be put up. Now, the transition between the subscribers' board operator and the trunk board operator is not made over a regular trunk line; it is made over what we call a call circuit, which originates and is made to function by means of a key on the subscribers' board, in front of the subscribers operator.

In case of a failure for some reason or another of those call wires, we have here this emergency call circuit by means of which a trunk line can be used for call circuit purposes. The emergency call circuits consists of a jack and the plug and the necessary wiring in order to establish and put up a regular trunk-circuit for call wire purposes.

Q. What is meant by the miscellaneous equipment in sections, shown on page 45, one lot of which is appraised at $3,688.00?

A. You are referring now to item Number 5 on Page 45?

Q. Yes.

A. And appraised at how much?

Mr. Postle: $3,687, instead of $3,688.

[fol. 1967] Mr. Burr: The unit cost, $3,687.97.

The Witness: I understood you to say "688."

Q. Well, under that heading reproduction cost new, it is $3,688.00.

A. Yes, $3,688.00.

Mr. Postle: You said "688," Karl.

The Witness: Yes, that is what I understood. I just wanted to be sure that we were talking about the same item.

Q. We are.

A. Miscellaneous equipment in sections consists of jack space, the designation strips, cord hooks and jack fasteners, such items that are put in in advance of the installation of the balance of the equipment.

The next item is the wire chief's desk. The wire chief's desk is used for testing various lines and the reception of trouble reports, and consists of testing circuits——

Q. Just a moment, will you describe that rather fully, Mr. Williams, because one wire chief's desk is shown in your appraisal at $2,534, and I wish you would elaborate if you please the items which may make that appear rather an expensive desk?

A. Yes. Well, the wire chief's desk has in it a considerable amount of rather expensive equipment. Testing circuits are rather complicated. It has volt meters and it has bridges for measuring resistances or measuring opposition, whether it is resistance or induction or whatever it may be, in the various lines. It has the various telephone circuits, outgoing trunk lines, to the subscribers' board, subscribers' desk; it has call lines; it has termination to the plug-up lines [fol. 1968] that I have previously discussed and contains a stupendous amount of rather expensive equipment.

The next item is the repair chief's desk——

Q. Repair clerk's desk, isn't it?

A. Repair clerk's desk—I beg your pardon. This desk is for the purpose of the first reception of trouble reports. These trouble reports are received at this desk and sent to the wire chief's desk. It has various circuits from the different boards, jacks and plugs for the termination of the different circuits from these boards and of course is equipped with the operators' telephone circuit for the use of the repair chief—the repair clerk.

The next item is the chief operator's desk. The chief

operator has supervision over all of the operators and supervisors in a given central office and her duties are to see that calls are answered and handled promptly; that the operators are working efficiently and for this purpose she has connection to the various operating positions. In this desk are an operator's telephone circuit for use of the chief operator, call wires, the monitor circuit for the purpose I just stated—that is, cutting in and monitoring and supervising the way in which the various calls are handled by different operators, a buzzer circuit which in a way is similar to the night alarm circuit just described in that it is an audible signal to call her attention to a call being made to her desk, cords and jacks; these are the principal items of equipment on the chief operator's desk.

The service observing desk is also for the purpose of [fol. 1969] assisting the chief operator in observing the quality and amount of service being given by the different operators at the different positions. In it are an operator's telephone circuit fo- the service observer, call wires, lamps, and also generally find some stop watches with this position or with this board in order to time the calls, the length of time on the calls as they are made.

The information desk may consist of one or several positions at which are employed operators who furnish information relative to conditions of lines, subscribers' numbers, and information of a like nature. The desk is equipped with an operator's telephone circuit for each operator, incoming trunks from the different boards to these positions, jacks for the termination of these trunks, card index files giving the information relative to each subscriber, and like equipment. Under frames——

Q. I wish you would explain the item next of frames and racks, which are shown in the appraisal at something over $11,000.00; they are items which are referred to very frequently in the record in this case and will you explain the purpose, what a frame is and what a rack is, as briefly as you can?

A. Yes. Under the headings of frames and racks I have listed the frame and racks and equipment to a certain extent on those frames and racks. For instance we have first for the termination of wires or cable pairs in the central office what we call a main distributing frame. The main distributing frame is for the purpose of termination and

also the purpose of protection, the protectors are mounted [fol. 1970] on one side of the frame, either the vertical or horizontal, depending upon whether the board is a B or A type.

Q. How high and how long is the frame that you are now discussing?

A. It varies considerably in the different offices.

Q. Yes. I didn't ask you about each one, but I mean this one in the Akron Exchange that you are talking about now?

A. My recollection is that the frame in the Akron offices I should say was nine or ten feet high, anyway, and the length as I recollect it—it has probably been changed since I saw it last because it is growing——

Q. Yes?

A. But the last time I saw it it was probably in the neighborhood of 40 or 50 feet.

Now, the purpose, or also another purpose of the main distributing frame is for the purpose of making interconnections between any particular subscriber's number on the switchboard and any particular cable pair entering the central offices, in the same central office area; in other words, it is ofttimes desirable to change the number for a given cable pair from one number to another; for instance, a subscriber gives up his service and moves from one place to another. If he moves to some place within the same central office area, it is oft times desirable both for his convenience and for the convenience of the company, for him to retain his same number, even though he is at a different street location. This is oft times convenient for the subscriber on account of people calling him having his old number; [fol. 1971] it is also convenient for the company in that they have to keep a lesser number of changes in the information files, and also makes it possible for the same number to remain in the directory listing.

Q. Yes.

A. As indicating the proper telephone number of that particular subscriber. Changes of this sort are made, as I say on the main distributing frame. The termination from the outside cables or wires being made on the main distributing frame, either on the vertical or horizontal, depending upon the type of the board, are then taken care of on the opposite side, that is the reverse, either the horizontal or the vertical side, by means of what we call jumper wires. They are pair wires that go across from one side to the other, off the inter-

mediate distributing frame. As I say, we have the two sides of the frame because on one side are mounted the termination and on the other side are mounted the protection.

Q. Have you any idea of how many of those terminations there are in that board?

A. Well, there is a termination for every line upon that board.

Q. Yes.

A. Now, how many there are, I have not figured out; it could be found out, though.

Q. It runs into thousands?

A. Yes.

Mr. McConnaughey: Mr. Burr, let him explain what he means by the term "protection" that he uses.

The Witness: Protection, or protectors that are mounted on one side of the main distributing frame for the purpose of keeping out stray currents of one kind or another. They [fol. 1972] may be either in a case of open wire or aerial cable, termination, lightning discharges, or they may be discharges of high voltage current, caused by wires or cables in contact with high power feeds of electric companies; they may be smaller currents which are either intermittent or not of high voltage which come from a casual or incomplete contact with some foreign power-distributing agency. The protectors themselves consist, in a central office of this nature, of carbon protections with open face cutouts, which in case of the reception of a considerable amount of current, melt a contact and spark across an open gap closing the circuit to ground, so that the high voltage current is led to ground and does not get into the delicate central office equipment, which if it did would cause considerable injury to the fine windings of coils and things of that nature. There is also in connection with this protection equipment what we call sneak coils, or what we call coils for keeping out sneak currents. That is, they are generally low voltage currents, but if they continue would cause trouble in different parts of the central office telephone equipment. There is a coil provided which, after a certain length of time will melt a contact point under much lower voltage than will be necessary to operate the open face cutouts and that is to take care of the lower voltages which might by continuation

injure the central office telephone equipment. This coil operates when the contact is melted, the small rod plunges through and makes connection to the termination of a ground and this sort of a current is also carried off the ground and [fol. 1973] not allowed to get into the central office telephone equipment.

Mr. Burr: Does that explain it sufficiently?

Mr. McConnaughey: Yes.

The Witness: It is necessarily somewhat complicated, even as simple as you can make it.

Mr. McConnaughey: Well, that explains the purpose. I didn't know what kind of a thing it was. That is all right. That is all.

The Witness: Now, we got up into the final parts of the main distributing frame. From the distributing frame, the subscribers' lines are cabled across to the vertical side of the intermediate distributing frame. From the vertical side of the intermediate distributing frame are taken off——

Mr. McConnaughey: Just a minute, I don't want to interrupt, but he is talking about frame and intermediate frames?

The Witness: Yes.

Mr. McConnaughey: Will you distinguish those while we are going along?

The Witness: Yes.

Mr. Burr: Be glad to have you now.

The Witness: As I said, the main distributing frame is for the purpose of termination protection of subscribers' lines and the interconnection between subscribers' boards and cable pairs. Now, briefly the purpose of the intermediate distributing frame is for the interconnection between [fol. 1974] the multiple of a switchboard and the answering jacks of a switchboard. As I stated a while ago, in connection with the purpose of the peg count circuits, it is oft times desirable to change the load from one operator's position to another, to change the termination of certain lines, and that can be done on the intermediate distributing frame,—that is the connection can be made or shifted between the multiple in a board and the answering jacks in a board.

Q. You mean by that where a subscriber's line terminates on one particular board, you can by use of an intermediate frame change the termination of that subscriber's line to some other board?

A. No, to some other position.

Q. I mean some other position, some other panel on the board?

A. Yes, you may have subscriber's number 100 terminating in position Number 2——

Q. That is it?

A. Now, that of course if the multiple runs all through the board so that it is accessible to any operator, but the answering jack termination may be in position Number 2. Now, owing to an overload on position Number 2, it may be necessary to terminate that particular subscriber's Number 100 or 200 or whatever we call it in another position. This shift between the connections through the shift of one position to the other is made on the intermediate distributing frame.

Mr. McConnaughey: Where are these two frames located with reference to each other and the board?

The Witness: Well, the two frames with reference to the board—the board is located in the operating room and the [fol. 1975] frames are located in what we call the terminal room. It is in it. Mostly. These frames and the different routes that I will describe a little later. With reference to each other, they may be located in different positions, in different places, depending upon the floor space available and what is desirable in the distribution of that floor space.

Commissioner Poor: We will recess at this point until 1:30.

A recess was then taken until 1:30 o'clock P. M. of same day.

[fol. 1976] Tuesday Afternoon Session,

January 12, 1926.

And thereupon the further hearing of this matter was resumed pursuant to recess.

Present:

Carl E. Burr, S. H. Tolles, and C. S. Maltby, on behalf of the Ohio Bell Telephone Company.

W. S. McConnaughey and Fred W. Postle, Special Counsel, on behalf of the State of Ohio.

Frank M. Dotson, Director of Law, Counsel on behalf of the City of Toledo, Ohio.

Henry M. Hagelbarger, Director of Law, Counsel on behalf of the City of Akron, Ohio.

C. A. Leach, Director of Law, Counsel on behalf of the City of Columbus, Ohio.

Chairman Marshall: You may proceed, gentlemen.

[fol. 1977] And also GEORGE B. WILLIAMS, resuming the stand, for further direct-examination, continued his testimony as follows:

Examined by Mr. Burr:

Q. At the time of the noon adjournment, you were discussing for Mr. McConnaughey, the item of intermediate frames. Will you proceed from that point and finish your discussion of the other items comprising the switchboard which you have under consideration.

A. I think we have just got the circuits cabled across from the main distributing frame to the vertical side of the intermediate distributing frame on this side——

Q. Yes.

A. The cables take off running to the multiple in the switchboard.

Q. By this side, you mean what side?

A. Vertical. Then the circuits or wires, by means of this jumper wire are taken across the horizontal side and from this side take off in place of the subscribers and answering jacks, and to the coil racks and relay racks.

The next rack that I will discuss is that of the coil rack, which is a rack generally placed close to the intermediate distributing frame and which contains the repeating coils, which as I stated previously were a part of the cord circuits; adjacent to the coil rack is the coil rack fuse panel. This coil rack fuse panel contains the fuses which supply current and distribute current from the battery supply to the coils [fol. 1978] on the coil rack and it, through the fuses, affords protection in case of an abnormal supply of current from the battery supply to the coil rack and the rest of the central office telephone equipment.

Q. In the vernacular so that it won't burn out?

A. Yes. Incident to that, I might state that the repeating coils which are found in the coil circuit are the means

through which battery is supplied to the subscribers, both; talking at both ends of the circuit, and to the operators, and it not only supplies battery, but it distributes this battery in accordance with the various loop resistances of the two ends of the circuit; that is you may have one station that is fairly close to the central office in which your loop resistance is not very high; another one on which you have a long circuit, that is the other subscriber who is talking on that complete circuit may be on a long circuit, a long distance from the central office and the resistance is much higher.

The repeating coils not only supply current, but they distribute the proper proportions of current in proportion to the amount of loop resistance of the two ends of the circuit.

Next we have the relay rack which is also located close, generally, to the frames already discussed, which contains the line to cut off relays, which I have already stated are found in the subscribers' line circuits.

The cable racks are the iron frame work or racks that support the cables running between the various racks that I have already discussed at the various frames and the [fol. 1979] switchboards.

The miscellaneous equipment on frames and racks is principally the protection that I have spoken of and the terminals;

Cable and wire covers the cables themselves that I have been referring to. This jumper wire between the horizontal and vertical sides of the main distributing frame and the intermediate distributing frame and the power cabling, which is the incoming power cable from the source of supply to the batteries, and the various cables between the batteries and the coils and racks and ringing machines and such other items of equipment.

Under power plant, there are listed first the power plant protection panels, which is the panel on which are mounted the fuses protecting the battery from excessive incoming currents from the source of power supply. This consists of slate panel with fuses and switches.

The power switchboard is the switchboard governing or controlling the amount of current and the path of the current that is fed to the batteries. The battery fuse panel is a fuse panel on which are generally mounted fuses protecting both the battery current from the batteries to the ring-

ing and charging machines, and the current from the ringing and charging machines to the switchboard.

We also have in the power plant the ringing, charging and various tone machines. The ringing machines are those machines which supply the various kinds of ringing sent out over the subscriber's line; that is by means of insulation [fol. 1980] or insulating bands in the contacts on the power machines the ringing current is broken into certain specified intervals so that we have sent out over the line on one side or the other side either a continuous ring, spaced with a silent interval or a ring spaced with a short, silent interval and another ring and then another silent interval. In other words, it breaks up the supply of ringing current so that it is sent out over the lines in accordance with a pre-determined code.

Mr. McConnaughey: Excuse me a minute, where is this in the inventory that he is telling us about here now.

The Witness: Page 45, Mr. McConnaughey, and I am describing the items that are listed under power plant, just about half way down the page.

Mr. McConnaughey: I get you all right.

The Witness: Charging machines are generators used for the charging of batteries, there generally being an auxiliary source of supply to that where power is obtained direct for power needs, so that in case of the failure of the ordinary power supply from the power and lighting company, we have available a charging machine which can be used to manufacture or generate the current necessary, right on the spot.

Tone machines are to a considerable extent similar to ringing machines, in that they sent out in accordance with the pre-determined code a certain tone, either for this busy back circuit that I spoke of in connection with the trunk [fol. 1981] board or trouble tones, or various other tones of that kind. We have for instance more than one kind of a trouble tone. We have a trouble tone on the subscribers' board and we have a trouble tone on the trunk board and therefore, various tones of this kind. The total down to this point—well, possibly I had better go on and describe a little bit some of the other items in the toll board and in the —very briefly in the Alliance subscriber machine switching board before I take up the discussion of——

Q. Associated——

A. Labor and incidental and various other costs.

Q. Now, you are choosing Alliance at random as being a sample of the toll board?

A. Well, with Akron as being a sample because it happened to come right after this and was one of the first ones.

Q. Yes.

A. The toll equipment in the subscribers' board at Akron consists of one section of Number 1 C, 8 panel, 3 position, 9600 line sections. This is the equipment in the Akron subscribers' board. That is very similar to what we call B equipment or equipment generally found in the trunk switchboard and is for the completion of toll calls. In other words, that is the ending in this section of the outgoing toll switching trunks from the toll board, so that the calls originating from some other town can, in this manner be completed to the Akron subscribers.

The switching positions are similar to a great extent to those found in the subscribers' board and they are in connection with the sections, listed above.

[fol. 1982] The incoming trunk circuits and the incoming call wires are the call wires and trunk circuits from the toll board to this section of the subscribers' board.

The multiple is the multiple jacks and so forth for the different incoming trunks.

The outgoing trunks are to a very considerable extent the same as those found in the subscribers' board, being to the regular trunk board, to the toll board and to the various desks.

The positions are the positions in which this equipment is found for the completion of calls for the toll board to the subscribers' board.

The incoming trunk circuits are the circuits themselves from the toll board, the toll loops are special terminations of toll lines coming direct from the subscriber, instead of going to the subscribers' board as they ordinarily do, on account of the large amount of toll business originating from some particular subscribers.

Getting down to the next subdivision, we have a number 1, 5 panel, 2 position, intermediate type toll section, 17 sections; these are the terminations of the toll lines in the central office equipment and the type there indicated in one place as intermediate and the other as low is merely a definition of capacity as to the two types of boards.

Q. You are now discussing the Akron Toll Board shown on page 46 of Williams Exhibit 7-A?

A. That is right.

Q. Proceed.

A. The intermediate type toll sections handle the inward and outward positions of the toll board, the low type toll [fol. 1983] section handling the recording positions, where a record is made of outgoing toll calls and the call is then transferred on to the outward position.

Cable turning sections and the rest of the items found down there are similar, to a great extent to those found in the exchange boards.

Mr. McConnaughey: What is that directory desk; that is something new isn't it—fourth line from the bottom on Page 46.

The Witness: Oh, I was just seeing whether I had anything else. I will take that in just one minute.

Mr. McConnaughey: All right.

The Witness: Toll answering jacks, being the fifth line from the bottom in that large group in the middle there are a little different from subscribers answering jacks in that this equipment contains not only the jacks but the magneto busy signals, in addition to the signal lamps and relays. That is, they have two sets of signals on a toll board of this kind; that is, they have the regular signal lamps which light when a call comes and in addition to that have the magneto busy signal so that after the lamp goes out, the other operators in the toll positions and through which the incoming trunks are multiplied have knowledge that the particular line is busy through the indication given by the magneto busy signal.

The directory desk is a desk at which an operator or operators are stationed who have in their possession directories for a great many of the different cities that are most [fol. 1984] frequently called from a particular office. That is, if a man places a toll call and he says that he wants to talk to John Smith at Cleveland; he may have an idea or he may have information to the effect that John Smith lives on First Avenue, but he probably in a good many cases won't know his street address or very likely not his telephone number. Now, at the directory desk, there are directories so that when that call comes into the recording operator, it is then routed to the recording desk and the directory operator is able to supply the missing information

relative to the man's street number or certainly relative to his telephone number, or be able to ascertain that he has no telephone and it may be necessary to call him to a pay station or a public telephone. All of this information that is lacking when the call is placed by a subscriber at the calling station is to as large an extent as possible supplied at this directory desk to pass over the wire by the toll operator to the distant city, so that the operator at that end of the wire will have as much information as possible in order to locate that subscriber as quickly as possible so that there will be as little use of the lines for getting the information and for holding time as they can possibly have. Does that answer the question?

Q. What is the equipment supplied to that desk in addition to directories?

A. Well, that is most of the equipment. There is the desk itself and a means of communication with the various boards in the office through termination of circuits, and operators telephone set so that communication may be had for the purpose of asking questions. A ticket operator's [fol. 1985] table is in a sense a directory desk also, in that this information is frequently supplied from the ticket operator's desk; and also the ticket operator's desk may be used for a rate-quoting desk in which the rates are quoted and placed on the ticket, either before or after the call is completed, as quickly as possible, so that, as happens in a great many cases, if the subscriber calls back and is anxious to find out how much that telephone call is going to cost him, they have the information available just as quickly as they can get it, so that they can supply that information.

The next item is a toll test panel and associated equipment. This is a number 4 toll test panel and contains testing circuits, jacks, cords, plugs, Wheatstone bridge, volt meters and so forth similar to that discussed for exchange equipment; and also the associated equipment includes the various items that are necessary to complete the circuits for phantom circuits, simplex circuits, composite circuits, duplex circuits, composite ringing circuits and various circuits of that kind.

Do you care to have me give any description in a general way of some of those circuits?

Q. Very briefly.

Commissioner Poor: Yes, make it brief. I don't see the necessity for all of this.

The Witness: If you don't care for it, I don't care to put it in. I just thought if somebody wanted it, I could put it in.

The frames and racks listed here are similar to those [fol. 1986] already described for the subscribers' boards, but associated with and for the toll central office equipment. Now touching just briefly for a minute or two on some of the equipment on page 47. This is a little different equipment under the heading of "Alliance subscriber", inasmuch as it is machine switching or what we call automatic central office telephone equipment.

Q. Yes.

A. The first item listed there is primary master switch, there being 60 listed. A primary master switch is the switch that controls the operation of the primary line switches and the selection of outgoing trunks, from the multiple banks of the primary line switches to the secondary line switches, for first selectors.

The first switch itself is an assembly of relays, what we call a wiper for making connection with the multiple bank of the primary line switch; a control rod connected to the back of the master switch controls the operation of all of the primary line switches and determines which trunk in the multiple bank will be selected by the primary line switch. In other words, the wiring between the multiple banks and the primary line switches and the multiple bank of the primary master switch is such that the primary master switch keeps the primary line switches always in front of a vacant trunk going to the secondary line switches, for selectors.

The secondary master switches serve the same purpose as the primary master switches. They are different only in that they are associated with the secondary line switches instead of the primary line switches. Primary line switches are the means of termination of the incoming subscribers' [fol. 1987] lines and the machine switching central office equipment. The frames, line switches and connectors, are the frames on which these line switches, the master switches, of multiple banks wiring terminals are located.

Selectors are to a certain extent similar to line switches except that they ordinarily have a wiper connection to

the multiple banks, instead of a plunging connection as found in primary and secondary line switches. They have not the second step in the machine switching. The reason that the lines are terminated on primary line switches rather than selectors is because primary line switches are not nearly so expensive as selectors, and by terminating the lines on primary line switches, we have, through the multiple set up of trunks, a certain flexibility in the trunks which gives almost the same trunking efficiency as if we had terminated directly on selectors; and we do that without nearly so much expense.

The connectors are the last step in making a connection in machine switching central office equipment. That is, for instance for calling four numbers of machine switching central office equipment, the first connection is made with the primary on the switch; frequently then, we have the secondary line switch in order to increase the efficiency of trunking and then the first dial from this is taken care of on the first selector. That is, if you dial say for instance the number 4567. Your first selector will step up four places; the connection of the selector itself will then be such that in ringing around its multiple it will automatically [fol. 1988] select a vacant trunk. Now, that is stepped up four times to correspond with your first unit that you pulled, which contains the four impulses; a vacant trunk is then selected of the second selectors; next this second selector, in accordance with your -5 dial steps up five times, five impulses, and swings around and selects the vacant trunk to your connector. The connector corresponding with the impulses contained in the -6 will then step up six times or six steps, but does not step over like a selector, any more vacant trunks; it must then select the -7 number on that trunk if it is vacant. If it is not vacant, the selector automatically puts the busy back tone on the circuit, so that the subscriber knows that that line is busy, just exactly the same as if a trunk board operator had done it in manual equipment.

The selector switch always furnishes the path for furnishing, conducting circuit, and the ringing current to the called subscriber.

Now, these reverting call switches are switches that take care of calls where a subscriber calls another party on his same line. If you have two subscribers, for instance,

on a given line, on a party line, or four subscribers, your reverting call switch will connect right back over that same line and ring the other subscriber. It is done in these reverting call switches.

Traffic registers to a considerable extent are a good bit the same kind of equipment or they serve the same purpose as the peg count circuits in manual equipment offices.

That describes the principal different items that are [fol. 1989] found in machine switching equipment and in case any further description or discussion is desired of any of that equipment later, why, I will be glad to give it.

Q. Does this description which you have given of the Akron Board, the subscriber in Akron, and the board shown under Alliance subscriber, apply to all of the boards shown in your appraisal under the form of general office equipment?

A. As a general proposition that equipment fairly well describes the equipment that is found in the different offices. Of course there are no two offices or no two circuits that are precisely the same; generally speaking, we have those different circuits, but without going into an endless amount of detail, I would say that that description generally covers the equipment in the different offices.

Mr. McConnaughey: Mr. Burr, when he says the cable and wire in various places, what does he mean?

Q. Will you answer that question?

A. Cable and wire, I think I covered that, but I will repeat it just generally.

Mr. McConnaughey: If you did, forget it; I did not catch it.

The Witness: I think I did, but I can give it to you in just a few words. It is the cable and wire in the terminal rooms and between the various frames and racks and the switchboard, and the wire on the frames and racks, those jumper wires I spoke of and also the power wire, feeding the power into the batteries, and between the batteries and the machines, and between the machines and fuse panels, and switchboards and all of that sort of thing.

[fol. 1990] Mr. McConnaughey: All of that wiring within the exchange?

The Witness: Within that central office except the wire

that is taken to the switchboard itself. That comes on this multiple.

Q. Going back to the board which you have discussed under the head of Akron subscriber at page 45, following the item labeled, "Power Plant," a little below the middle of the page, you have the item, "material," and that is carried across the page to the figure of $384,865.00; what does that mean?

A. That means that that is the total reproduction cost new as of June 30, 1925 for the material part of the central office telephone equipment beginning with the first item under Akron subscriber on page 44 and ending with the power plant on page 45. The amount of that item is $384,865.00.

Now, the material costs are taken from price lists covering the costs of the various items that go to make up central office equipment and which are furnished to us by the various manufacturers of central office telephone equipment.

For instance, on Western Electric Manufacturers' equipment, we have our Western Electric prices; on Kellog boards we have our Kellog prices; on Stromberg-Carlson equipment, we have our Stromberg-Carlson prices. These come to my office, price lists corrected daily and weekly and monthly from all of these different manufacturers that I have named. That is practically all of the manufacturers [fol. 1991] of central office telephone equipment.

Q. And these material prices which you say you used in evaluating the property shown in your appraisal were prices as of what date?

A. They were prices as of originally December 1st, 1924, corrected to and compared with the prices as of June 30, 1925; in order to determine that the fluctuations in prices had not been such as to be of any considerable extent or any moment as to the determination in the value of June 30, 1925; I compared a great number of items, but while I found certain fluctuations, both up and down, the net difference in my judgment is so small that I am perfectly willing to say that the prices here are applicable as of June 30, 1925.

Chairman Marshall: Mr. Williams, when you speak about

the price list of the Western Electric, do you mean the prices at which they furnish the Bell?

The Witness: Yes, sir.

Q. The prices at which they furnish the material to your company, the Ohio Bell Telephone Company?

A. Yes, and those prices—I think that I am perfectly safe in saying are exactly the same prices here as are received here by the Public Utilities Commission of Ohio.

Q. How do you mean received by the Public Utilities Commission?

A. From the Western Electric Company.

Q. It furnishes those prices to the Commission, does it?

A. Yes, I had first hand knowledge of that during my connection with the Commission and from information that I have those prices have not been changed. They are the [fol. 1992] same prices as we are receiving.

Q. My attention is called to your last statement in which you referred to the prices as being the same, the prices received now as being the same as those received by the Commission while you were with the Commission; you mean do you not, the character of the price list and not the prices themselves?

A. That is correct.

Q. Tell the Commission the source of the quantities used for each class of plant and appraised by you under the heading of "Central Office Equipment."

A. The quantities originally were taken from field inventories.

Where available, they were obtained by taking into the field, specifications and drawings, plans of the Central office equipment, and checking those plans and specifications with what was actually found in the field, item by item; and where those were not available, taking originally in full detail the central office telephone equipment. Subsequent to June 30, 1924, the quantities of material were brought up to June 30, 1925, partly from our record of the additions and deductions to central office telephone equipment and partly, wherever necessary by an actual field check of the changes during that year. This applied to a considerable number of the multiple offices and to practically every one of the magneto offices.

Q. Give your reasons for the classification of the property as used in your appraisal?

A. I have classified it in this manner, because the items that I have set up indicate about as nearly as I can indicate, [fol. 1993] the principal divisions of central office telephone equipment without going into an almost endless amount of detail in setting it up in my appraisals.

Q. Have you available in your office such supplementary information as will apprise the commission's engineers of just what is included in any of the items classified as you have described?

A. We have available the pencil detail for every item of every central office installation.

Q. Discuss next, if you please, the items which appear after the item of material on page 45.

Mr. Burr: And the Commission will understand, of course, that in referring to page 45 and page 46 and page 47, so continuously, we are referring to those pages and the matters therein shown, as typical of the other switchboards and items listed under central office equipment in the succeeding pages of the inventory.

We will cover that in a few moments, and I would like to have the Commission understand that the reason why we are so repeatedly referring to these pages, 45, 46 and 47, is that they are taken as examples or as typical of what we are discussing in general.

Now, you may proceed.

The Witness: Under the title of material on Page 45, I listed first, "Installation labor," for the item that I have been discussing amounting to $142,400.00; installation material amounting to $5,773.00; Western Electric Engineering amounting to $28,865.00; freight and cartage amounting to $3,849.00 and contingencies amounting to $3,849.00.

[fol. 1994] Now, the labor here listed covers the labor of receiving this equipment, checking the detail of it, installing of the various items, such as the switchboards and frames and racks, the power equipment and all of the various items, the installation of the cables, the splicing of them, the forming and assembly of the multiple; the erection in the frames, the placing of the coil and relay racks and the placing of the coils and the relays on these racks; the installation of the power equipment and the batteries and all of the various items and the testing out of this equipment after it has been installed.

The item of installing material covers such items as——

Q. You mean installation material, do you not?

A. Installation material, yes, covers such items as beeswax for boiling out the forms, the cables. Shellac for coating them; paint for painting various places where paint is rubbed off or taken off; lacing cords for putting up the forms, solder for use in splicing the cables; screws and nails and such items as small material.

The Western Electric Engineering covers the more detailed engineering that is done by the manufacturer, in addition to the engineering, the more general engineering that is done by the purchasing company, in this case, The Ohio Bell Telephone Company. That is the telephone company sets up its traffic requirements, its traffic load, the kind of service that it expects to give, the floor plans for the buildings, the probable desirable location of the various parts of the central office telephone equipment and plans and so on; these plans are then sent on to the manu- [fol. 1995] facturing company who engineer in considerable more detail. For instance, on the various circuits, testing out or trying out every phase of proposed circuit, set-up made by the purchasing company, suggesting modifications if they feel that such modifications are necessary or will be of greater advantage; working out the various details of, for instance, wood finish and setting up the iron with details that are necessary in order to properly manufacture the frames and racks; the items of metal work of different kinds, assembly details, the drilling of iron work and stamping the various parts, such as on the switchboard the numbers and designations of different kinds; in other words, the engineering done by the manufacturer has got to be in absolute detail so that the various parts and kinds of the equipment will be taken care of down to the last detail in type of material and frame that is to be occupied, the space to be occupied and the manner in which that material will coordinate one part with another, and function.

The item of contingencies——

Chairman Marshall: Wait a minute, before you leave that. Do you pay that engineering fee to the Western Electric Company for engineering every exchange that you build?

The Witness: Yes, sir.

Chairman Marshall: Or manufacture?

The Witness: Yes, sir.

Chairman Marshall: Or replace?

The Witness: Yes, sir, we pay that engineering cost to any manufacturer and any company pays it to any manu-
[fol. 1996] facturer who manufactures central office telephone equipment for a purchasing company. It makes no difference what the company or what company you order from. There are a great many details of engineering-manufacturing that are necessary and come in as a part of the price or a part of the invoice bill that they make to the ordering company. We get that sort of thing from the Kellogg Company or from any other company that we buy central office equipment of.

Mr. McConnaughey: Does that come in as a separate item?

The Witness: It does. I will discuss that separation in just a minute. I am discussing now the description, what these items cover.

Commissioner Poor: Well, couldn't you get that same engineering advice from the research department of the A. T. & T.?

The Witness: Only as a general proposition, not as a specific thing, with regard to a particular board. If we did the research department would have to come in here to Ohio and specifically engineer every board that we put in.

Commissioner Poor: You have a right to call on them to do that haven't you?

The Witness: I doubt it to that extent. No. No. We have the benefit of their research, but every board that is put in is a problem in itself in regard to traffic, load, kind of service, location and all of that sort of thing. Each board is a particular job in itself just the same as the construction of a building is a particular job for an architect. Every building is different.

[fol. 1997] Now, we can get certain details; we can get certain advice from the research department as to the general set-up of things. We get those bulletins and specifications; we can also get from the research department particular advice in regard to some outstanding problem, something very much out of the ordinary, but the general run of stuff, we set up the general plans and the manufacturer sets up the detail engineering for it; but that is something entirely different from what the research department does.

Commissioner Poor: Well, then, you don't need to call on the research department for anything?

The Witness: Oh, yes.

Commissioner Poor: In regard to this?

The Witness: Yes.

Commissioner Poor: You have the general plans and the manufacturers does the specific and difficult engineering; what do you call on the research department for in regard to installation of a switchboard?

The Witness: Problems that are very much out of the ordinary, Mr. Commissioner Poor, something that is not met with ordinarily even by the manufacturer. Now, you are getting a little bit out of my line on this license contract proposition; that is something that comes in on the revenues and expenses.

Chairman Marshall: You know enough about it to know that they have always contended here that they could obtain anything at your request that your own engineering force here in Ohio, didn't furnish; that they did not maintain your own state organization for that four one half per cent. [fol. 1998] The Witness: Oh, yes.

Chairman Marshall: Well, then, why such items as $28,000,000?

The Witness: Because we do not do that, Mr. Commissioner Marshall, we would have to call on the Research Department to engineer every particular installation we have had in the State of Ohio and it would mean that there would be for Akron, an item similar to this $28,000.00, and on every other one there would be that and I am under the impression that the license contract payment if necessary to cover that sort of engineering would have to be very materially increased. The engineering of any switchboard is a rather complicated matter and the board must be engineered specifically and separately, just the same as every building must be planned by the architect specially unless you are going to have a precise duplicate, one building of another, you are going to have separate architectural fees on your buildings, in the same way you are going to have separate engineering costs.

Chairman Marshall: For instance, you are going to replace an old switchboard in an exchange; don't you furnish any plans and specifications in the first instance to the Kellogg people or the Western Electric of what you want,

your load and so forth, from your own engineering force here?

The Witness: We furnish general plans, yes, sir, but those plans are not nearly complete enough for the manufacturing of that job.

Mr. McConnaughey: Don't the Commission think it would be a good thing to cover this point by asking him to show a typical case in a typical way with plans and speci- [fol. 1999] fications of just what they furnish and just exactly what the Western Electric or anybody else does, in response to such a request.

Chairman Marshall: Do that now or later if he will.

The Witness: I haven't anything like that with me but I will be able to produce that exhibit if you care to have it.

The next item is that of contingencies and which covers the local purchase of material used for scaffolding in erecting the frames and racks, floor paper for recovering the floor, protecting the floor, and the walls, frequently, during the installation of central office equipment; the transportation of the installing employees to the particular town in which the installation is made; the temporary board and lodging, the purchase of gasoline and such items as that.

The freight and cartage is the freight and cartage from the point of manufacture to the point of destination on each particular bill, on the original cost basis. Of course, specific freight and cartage is shown for each particular job.

Having in mind the principle that in my judgment the best indication of what it would cost to reproduce the property of a particular type as of a given date is what it is actually costing to produce or install similar property as of about the same time and under similar circumstances, I have, as I have said, gone through the price lists covering the actual costs of material for the Ohio Bell Telephone Company with the various material costs. Similarly, I have [fol. 2000] gone to the actual costs of installation for central office telephone equipment as experienced by the Ohio Bell Telephone Company in the State of Ohio for a period of about two years prior to and for sometime subsequent to June 30, 1925.

I have drawn off from the records of the company the records of the actual cost of construction and installation of equipment as paid for by the Ohio Bell Telephone Company. From these actual costs, I have eliminated costs

covering only partial installations or remodeling of various central offices, having new installations entirely. The volume of work or the volume of costs that were analyzed in order to determine the labor, the installation material, engineering, freight and cartage and contingencies were about $1,750,000.00.

I analyzed the costs and set them up separately for the material part of the cost, the installation labor, the installing material, the engineering, the freight and cartage and the contingencies. I reduced the cost for the labor and other items to a percentage or percentages of the cost of the material, giving for the actual costs of this $1,250,000.00 worth of installation a labor cost which was 37 per cent of the material cost. For the installation material cost 1.5 per cent of the material cost; for the Western Electric Engineering, 7.5 per cent and for the freight and cartage 1 per cent and for the contingencies 1 per cent.

These percentages are then applied to the $384,865.00, giving for each of the items what in my judgment would [fol. 2001] represent the fair cost to reproduce the items of labor, installation material, Western Electric engineering, freight and cartage and the contingencies, respectively.

Having available this $1,250,000.00 of construction costs as of recent dates, those costs representing the actual cost to the company and being of that considerable volume, I felt that that was the best basis I could get in order to set up what would be the costs for these various items in order to reproduce the property.

Q. Does this testimony with respect to the material prices, installation labor costs, installation material costs, Western Electric Engineering costs, freight and cartage, and contingencies, which you have just given, apply alike to the methods followed by you with respect to all the other central office equipment shown in your appraisal?

A. As a general proposition, yes, sir.

Q. Wherever you have used the term, "W. E. Co." engineering, is that intended to apply to Western Electric engineering only or have you mentioned in any of the subsequent pages, Kellog or other manufacturing company engineering?

A. It is designated as Western Electric engineering and that was set up that way on the basis that whether the Western Electric Company did the engineering or whether

the material was ordered from an independent company, there would be practically the same percentage of engineering that would be experienced and would have to be paid.

Q. In order to be as brief as possible and if I may summarize your testimony so far given, it is that you have [fol. 2002] appraised the central office equipment shown in your appraisal Exhibit Number 7-A on the basis of material and labor costs current as of June 30, 1925; is that correct?

A. That is right. I might mention one other phase of the pricing on this central office telephone equipment. On the smaller boards, the magneto switch boards, instead of using the items of Western Electric engineering, I have substituted the items of supervision, tool expense and supply expense. The reason for that is that on the smaller boards, it is the practice of the telephone company to install those boards itself. That is they are simple, very simple in construction in comparison with the larger common-battery, multiple and machine-switching boards and there is very little change in any of the boards from the standard set-up; there is no engineering necessary, at least only to a small extent and the company installs those boards, and the interest of the Western Electric engineering would be on the boards, its own labor, its own supervision, its own tool expense and its own supply expense.

Q. Why did you use in your appraisal the labor and material costs current as of June 30, 1925?

A. I used those costs partly because that is the date of my inventory and partly because I desired to produce an appraisal of the property as nearly the date of the hearing as I could possibly do.

Mr. Burr: Will you read that answer, please?

(Previous answer read.)

Q. And what in your judgment is the reproduction cost new of the central office equipment, account Number 221, [fol. 2003] of the Ohio Bell Telephone Company as of June 30, 1925.

A. $16,956,131.00.

Q. On what page is that amount shown?

A. It is shown on page 324, and it is also carried forward, page 43-A summary of the Central Office equipment.

Q. You are now referring to Williams' Exhibit Number 7-A?

A. Right.

Q. Please take up next the other item comprising central office equipment, namely, other equipment of central office, and tell the Commission where the appraisal of that property commences in Willaims' Exhibit Number 7-A?

A. It commences on page 325.

Commissioner Maullar: Just a moment, what did you give as your final figures as to the value of central office equipment?

Mr. Postle: $16,956,131.00.

Mr. Burr: That is for the central office telephone equipment, Your Honor.

Commissioner Maullar: I thought I understood Mr. Williams to read that last figure 931; it is 131.

Mr. Burr: I see.

Q. You may proceed, Mr. Williams?

A. Is there any question before me?

Q. I asked you to take up and discuss the account known as other equipment of central office, being a part of central office equipment, the account number is 222 and I understood you to say that the appraisal of the property begins at page 325 of Williams' Exhibit Number 7-A?

[fol. 2004] A. That is right, and continues through to page 354 of the same exhibit.

Q. Inasmuch as there are a good many items in that account, which at first glance might not appear to be relevant to the telephone business, I will ask you to please go through the items hastily and explain their use and why they are a part of the property of the company?

A. These are items that are not directly connected with the operation of the switchboards.

Commissioner Poor: He explained all of that this morning, didn't he? Generally he explained what he classified under strictly as central office equipment and then other equipment of central office.

Mr. Burr: Yes.

Commissioner Poor: I am sure he does not need to go in and explain what an oil can is or a waste can or anything of that kind. If there are some particular items in there don't speak for themselves, we can have an explanation on that, but let us don't go into the matters on the statement itself which shows what they are.

Mr. Burr: Such examples, Your Honor, as fernery.

Commissioner Poor: Yes, if there are some things there that do not explain what they are.

Q. Will you run through them hastily, Mr. Williams, and explain some of them that occur to you as you go through them?

A. Why, sure.

Q. For example, you have a number plate cabinet shown on the third line from the bottom of page 325?

A. A number plate cabinet contains, as I recollect, the number plates for switchboards or parts of equipment.

[fol. 2005] Q. With reference to such items as wicker rocker, chairs and kitchen furniture and kindred items, what part do they play in the business of the telephone company?

A. They are used for furnishing the kitchens and rest rooms of the operators' quarters.

Mr. Tolles: Restaurants.

The Witness: Rest rooms and locker rooms and various things of that kind.

Q. Well, I was asking you particularly with respect to the kitchen furniture; what purpose does that serve?

A. Why, the kitchen furniture is used in furnishing the meals to the operators.

Q. Yes.

A. They conduct a restaurant and the kitchen is the place where the meals are prepared. The operators of course pay for the meals.

Mr. McConnaughey: How about bridge lamps.

The Witness: Pardon me, Mr. McConnaughey?

Mr. McConnaughey: How about a bridge lamp?

The Witness: The bridge lamp is found in the operators' rest room as a matter of illumination.

Mr. Burr: Will you run through them, too, Mr. McConnaughey, and see if there is anything that occurs to you now about which you would like to inquire?

Chairman Marshall: Can't opposing counsel go through them later?

Commissioner Poor: Can go through them on cross-examination, if there is anything later.

The Witness: I might say in connection with the pricing

of this other equipment of central office with the exception [fol. 2006] of the school boards, upon which the same prices for labor and various other items are applied as on the central office telephone equipment, that there are no allowances for labor, freight and cartage, contingencies or any factors except the bare material cost, because we figure that these items, with the exception of the school equipment, as I spoke of, would be purchased, delivered on the job.

Q. How did you arrive at the amounts at which you have appraised the various items in this account?

A. Those items were taken by a detailed field inventory as of October 31, 1924. And I am rather glad you mentioned that item, for the reason that with the exception of the school equipment, there are no additions in this appraisal between October 31, 1924, and June 30, 1925, for any of the property added between those two dates. The reason that we did not add in net additions was because the school equipment itself was brought up to June 30, 1925, but inasmuch as we do not keep a running record or measurement record of this account, "other equipment of central office", we have simply lost the additions between October 31, 1924, and June 30, 1925, which should probably be considered in connection with these items of omissions.

Q. What was the source of the unit cost you have used for these items?

A. The items, with the exception of school equipment, which I have already discussed were priced from, mostly, local price lists, because we felt that if this property were to be reproduced that with this exception of school equipment, practically all of these items will be bought locally. [fol. 2007] Q. Those were costs now as of what time?

A. June 30, 1925.

Mr. McConnaughey: What date?

The Witness: June 30, 1925.

Q. And what, in your judgment was the reproduction cost new of that property, that is to say, "Other equipment of central office", as shown in your appraisal as of June 30, 1925?

A. $632,518.00, exclusive of the net additions which I said were left out and which should probably be considered in connection with the item of omissions.

Q. Yes?

A. This total that I have just mentioned is carried to Page 43-A of Williams Exhibit 7-A giving the total on that page for central office equipment of $17,588,649.00.

Q. Yes. And that amount of $632,518.00 first appears on page 353 does it not?

A. That is correct.

Q. Following that figure on page 353, you have listed certain items; I wish you would describe them if you please stating among other things why they are listed separately?

A. These are miscellaneous or associated items, associated with the other items which have been priced out for this account and which are mostly smaller items and for which some consideration should be given either in this account or in the item of omissions. They really do constitute omissions, because in this particular account, they have not been priced out. They are——.

Q. Has anything been allowed for them in this account?

A. No, there has not.

[fol. 2008] Q. Very well, proceed?

A. They are mostly minor items, but there is some value connected with them and if we desired to take the time to list all of those we would probably have gained some value *go* so doing.

Mr. Burr: That ends that value for the present.

Chairman Marshall: Let us take a five minute recess.

(Here a short recess is taken.)

Q. Before leaving the item of central office equipment, Mr. Williams, let me ask you whether or not the amount given by you representing the reproduction cost new of the central office equipment shown in your appraisal, $17,588,649.00, includes any allowance for the item of omissions?

A. It does not.

Q. Does it include any allowance for the Ohio Bell Telephone Company's engineering?

A. It does not.

Q. Or for its general expense?

A. No, sir.

Q. Or for the items of interest during construction or taxes during construction?

A. No, sir.

Q. I call your attention next to the fourth major item of

your appraisal consisting of the distributing system of the Ohio Bell Telephone Company and I will ask you to state where the summary and the itemization of the distributing system is in your Exhibit Number 7?

A. The summary appears on page 1 of Williams' Exhibit 17, the detail of the various items appears on pages 2 to 87 inclusive of Williams' Exhibit 17.

Q. What are the main items constituting the distributing system as covered by your appraisal?

A. Exchange pole lines, exchange aerial cable, exchange [fol. 2009] aerial wire, exchange underground conduit, exchange underground cable, exchange submarine cable and the toll lines covering pole lines, aerial cable, aerial wire, underground conduit, underground cable, submarine cable and the right of way.

Q. Now, the item of right of way applies to exchange and toll or toll only?

A. Exchange and toll.

Q. Will you first take up the item of exchange pole lines and tell the Commission the source of quantities used in your appraisal?

A. The quantities are taken originally from the field inventories covering the various exchanges of the Ohio Bell Telephone Company in the State of Ohio——

Mr. McConnaughey: Wasn't this all gone into on your inventory testimony?

Mr. Burr: Not with respect to his present testimony on the subject, no.

Commissioner Maullar: Was not all of this explained with the exception of carrying out the unit costs and the values of the property?

The Witness: No, there is quite a bit of it that is not; I only had in mind simply making a one-sentence statement of the source of this information. That is all I intended to go into on that as far as the source is concerned.

Commissioner Maullar: All right.

Q. Go ahead?

A. What part is in?

(Previous answer read as follows: "The quantities are taken originally from the field inventories covering the various exchanges of the Ohio Bell Telephone Company in [fol. 2010] the State of Ohio" plus the additions from the

dates of the field inventories to June 30, 1924 and for the year between June 30, 1924 and June 30, 1925, from the additions, supplemented with these field checks that I spoke of in about 80 or 85 per cent of all of the exchange property.

Q. Give the reasons for the classification of the property as classified in your appraisal?

A. Taking the exchange pole lines as a typical example, I have set up here the poles by heights only, and the average classing for each height and the cross-arms by average height. I have several reasons in mind for this sort of a classification:

First. Subsequent to the dates of the field inventories, the accounting does not provide for the keeping of measurements on minor items.

Q. Whose accounting does not?

A. That of the Ohio Bell Telephone Company.

Q. The accounting is kept in accordance with what system?

A. The system prescribed by the Interstate Commerce Commission and approved by the Public Utilities Commission of Ohio for utility companies. The accounting as maintained by the Ohio Bell Telephone Company costs a considerable amount of money each year even to keep the major items, and keeping the minor items such for instance on pole lines as anchors, guys, pole steps, butt steps, painting, butt treating, pole guards, setting, and all such items would entail a very considerable and additional expense to that already experienced for our plant accounting. I had from the actual inventories the detail for the minor items [fol. 2011] on a very large percentage of each class of property, the relative values of the minor items as compared with the major items on each class of property is in most instances small; taking into consideration the relative values of the minor items and the very considerable amount of volume of detail available from the field inventory in those minor items and the fact that the minor items are not carried in the accounting, I did not feel justified in recommending that the company spend what would be necessary to make a complete, new field inventory, probably amounting to some three or four hundred thousand dollars for this particular case; but thought it was desirable to use the information that we had on hand and that I felt that the

information we have on hand would give an answer that was accurate for all practical purposes. As a check on what could be done in the way of using the volume of minor items that were available, rather than to go out and take a new field inventory, I priced out for the pole line account all the detailed volume of pole lines which was available both for major and minor items for several of the larger cities.

Q. What do you mean by the detailed volume?

A. I should probably have said the volume of detail which was available.

Q. No, I was not objecting to your choice of words; I want to know what you meant by the volume detail or details of volume, details of what?

A. The minor items.

Q. Yes?

A. I had available from the field inventories a very considerable amount of the detail of these minor items.

[fol. 2012] Q. That is to say, how many minor items there were per pole?

A. No, not that, but exactly what those minor items were and how many there were of each of the minor items.

Q. Yes, all right?

A. Now, I price that out in full detail for several of the larger cities of the State involving a total on the tentative basis of costs that are used, which are not the same bases as I have used in the appraisal, about $1,730,000.00 worth of pole line equipment, that is, including both major and minor items. I then went to this same detail and drew off all of the poles by height and the class on only every tenth pole; also the associated minor items on every tenth pole. From this every tenth pole detail, I derived the average class for each height of poles; I derived also the percentage of the minor equipment to the major equipment per pole and I priced out on that ten per cent basis. The result as compared with the full detailed pricing was that by taking the full detailed pricing, I got $1,733,143.00. By pricing on this percentage basis, $1,739,810.00, or a difference of about four tenths of one per cent. I felt that this was a very good test as to the sufficiency of the detail that I had available on minor items from the field inventories. Taking as I did here a ten per cent check on these items, I came within four tenths of one per cent.

There are none of the accounts that I recall at the pres-

ent time, on the outside distributing system, wherein I had less than about 60 or 70 per cent of the detail—or the de-
[fol. 2013] tail upon about 60 or 70 per cent of the volume of the property represented in those particular accounts in that company-wide inventory.

Q. That 60 per cent of detail and from that on up means an actual 60 per cent of actual property?

A. Yes, sir, as taken from the detailed field inventories. I have all of the detail of these minor items as well as the major items, in a volume of property that is 60 or 70 per cent of the volume represented for that particular account in the company-wide inventory and the company-wide appraisal.

For instance, taking the exchange pole lines. In the company-wide appraisal, as represented in Williams' Exhibit 7-B there are a total of 422,142 poles. I have the major and minor item details from the actual field inventories, which are original bases of this company-wide appraisal on 415,950 poles, or in other words better than 99 per cent, I believe, of such property as is represented in the company-wide inventory.

Q. Have you the data available in your office for the Commission's engineers, showing that amount of property?

A. We have every bit of it.

Q. Proceed?

A. I might also suggest that while I have no idea as to what procedure the state might desire to follow in connection with any check on this company-wide inventory, that we have the maps representing the location of the property in the various exchanges, which will be available if they desire to check them; I have also in mind that there are available in the files of the Commission the considerable number of inventories of our property which are the same [fol. 2014] as those used by me in working up my detail on this minor detail matter, which inventories were submitted in evidence in various hearings in connection with our exchange cases, and which, in a considerable number of instances, have been checked, either wholly or in part, either by the Commission or the city's representative.

Now, those files of the Commission in themselves would afford a source of information available to the State as to the matter of a check which determines the accuracy of the

percentages, or to determine its own percentages for minor material. This is merely not even a suggestion on my part, but pointing out where certain information is available.

Now, in connection with——

Mr. McConnaughey: Just a minute, I want to understand the relation of the two percentages you have used, practically 99 per cent 60 to 70 per cent.

The Witness: 60 to 70 per cent——

Mr. McConnaughey: Well, wait, let me state it and see if I understand you. I understand that you have actually counted on your price what you consider about 99 per cent of the poles and that you have the data as to the minor materials on 60 to 70 per cent; is that correct?

The Witness: No, that is not correct.

Mr. McConnaughey: Well, I am wrong then.

Mr. Burr: The 60 per cent applies to another and an entirely different class of property.

Mr. McConnaughey: Well, I know it does, but it is this minor property that is associated with it.

[fol. 2015] Q. No, it applies to another main item of the appraisal, does it not, Mr. Williams?

A. Not exactly.

Mr. Burr: Take it out—as far as my understanding of that question, if you please.

Mr. McConnaughey: Well, that is not quite my understanding of it.

The Witness: The 99 per cent applies to the pole line specifically; that is on the pole lines. We have available minor material detail on pole lines representing 99 per cent, such material as there is contained in the company-wide appraisal. Now, the 60 per cent is a general figure of which I stated that we had at least that percentage available for every account.

Mr. McConnaughey: Oh, I see.

Mr. Burr: I still say I was right.

The Witness: Possibly you were.

Q. Proceed.

A. Also in regard to the exchange pole lines, in the detail field inventories we have the detail available for all of the minor items associated with cross arms to the extent of

253,249 cross arms, also the detail indicating precisely the kind of cross arms both as to wood and size. In the company-wide appraisal, there are listed 264,910 exchange cross arms. That would be, I think, about 91.92 per cent as much detail available in the detail field inventories as there is called for in the company-wide case as a whole.

To digress for a moment: The way I arrived at the average class of poles. I took all of the detail on all of the different kinds of poles in a given class or a given height of [fol. 2016] pole such as the different classes for that particular height and the different kinds of wood, that is eastern cedar, western cedar, chestnut or whatever it might be. Say, for instance, I took for example 30 foot pole, I priced it from the field inventories, the individual and specific kind of poles of all kinds in the 30 foot poles. Then I divided the amount that I found in that manner by the number of poles, which gave me an average price. I compared that average price with the prices current as of June 30, 1925, on 30 foot poles. I found that that price came nearest to a certain class of 30 foot pole. That is the way I determined my average class and having such a large volume of property available, I believe that the figures arrived at are certainly sufficiently accurate on the miscellaneous items, discussing that in connection with pole line account, as being typical of the method pursued to obtain the average type and average amount for each miscellaneous item per pole.

Q. And by miscellaneous item, do you mean associated item?

A. Yes, or minor item.

Q. Yes?

A. Per pole, I found from the field inventories as I have already stated, that we had 415,950 poles; I found in connection with those poles that we had the actual detail available on the minor or miscellaneous items for 877,148 items. The detail as to whether these items were anchors or guys or what not and also the kinds of them were available from the detailed field inventories.

I first found the fraction in each item per pole; that is, I took the total number of anchors and I found that there [fol. 2017] were so many anchors per pole. I next priced out all of the detail, for instance, of the anchors and I divided that amount by the number of anchors that I had

which gave me the average price per anchor. I compared that average price per anchor with the various types of anchors and found out that that was nearest to a certain kind of anchor. That was exactly the same method I pursued of arriving at my average class for the poles.

I next took the price as of June 30, 1925, for this nearest type of anchor and applied to it the fraction of an anchor per pole, giving me the price as of June 30, 1925, for the fraction of an anchor associated with each pole.

I did this with each item of the miscellaneous items; added them up and got the total fraction or the total amount of money for the various associated items, per pole.

This is the way that I handled the associated items and as I say, the details taken from our company-wide inventories are available for all of those miscellaneous items.

Mr. McConnaughey: Mr. Burr, would you object to putting into the record, at this time, a statement of the classification of poles; that is, what constitutes class D and Class E and so forth.

The Witness: I think that is already in the record, Mr. McConnaughey, somewhere in this case. I think it is in connection with the inventory.

Mr. McConnaughey: Well, if it is, I don't want you to repeat it.

Q. Will you look that up, Mr. Williams, and if not in, [fol. 2018] will you prepare such a statement?

Mr. McConnaughey: Well, that is all right.

The Witness: I will do so. I will be glad to do it, Mr. McConnaughey, if it is not in the record, although, I am sure it is. I may be able to give to either you or Mr. Hagenah a copy of our classifications.

Mr. Hagenah: They are Western Electric pole specifications, are they not?

The Witness: Yes. You probably have them.

Mr. Hagenah: You have Western Electric specifications, Western Electric throughout the case?

The Witness: That is what it is.

Mr. Hagenah: Sizes, readings and so forth—I am familiar with that.

Chairman Marshall: Then you don't want it, if you have it?

Mr. McConnaughey: But just now, if it is not in the record, we will arrange to get it in.

Mr. Burr: Aren't those American Telephone and Telegraph specifications and not Western Electric?

The Witness: Well, they are either one that you want to call it.

Mr. McConnaughey: He doesn't distinguish; Mr. Williams' department does not distinguish between the two.

Q. Have you finished with the discussion of the associated items?

A. I think that that covers this sufficiently and any further questions that may be desired or any detail that may be desired in connection with this, I will be glad to furnish it.

[fol. 2019] Q. In arriving at the reproduction cost new of the exchange pole lines covered by your appraisal, what unit costs did you use?

A. Costs representative of the costs necessary to reproduce the property as of June 30, 1925.

Q. And when you say, "The property", you mean the exchange pole lines?

A. In this particular account, yes, sir; and of course, the same thing applies to each account.

Q. How did you arrive at the amounts of material and labor, respectively, comprising the unit costs which you used for this account?

A. The amounts of labor and material and the various other items are set up and computed separately for each one of the different kinds of poles or items in each account. The unit costs for instance, on the pole lines include first the material costs, which cost- as I have already stated are taken from the price list representing the actual costs that would have to be paid as of June 30, 1925, for the material itself.

The freight costs are the next item, which cover the cost either from the point of shipment, originally the woods or depending upon how quoted in the price list, from the Chicago shipping yards.

The next item is the supply expense. Supply expense covers the cost of actually storing supplies. It covers the costs incidental to the store rooms, pole yards, and covers the labor of handling; the rental on pole yards, if not owned, the heat and light and so forth; it covers also or should cover also, such items as breakage, wastage, leakage of various material items. In arriving at the supply ex-

pense, used for pole lines and throughout this appraisal [fol. 2020] where a supply expense is applied, I have analyzed the actual cost of supply expense to the Ohio Bell Telephone Company for the year 1924. I found that the supply expense chargeable to construction as shown by the records of the company for that year was $331,724.00; that the amount of money spent, for construction materials was $9,088,077.00. This gave a percentage relation on supply expense to money expended for materials of 3.65 per cent.

I have rounded this out to 4 per cent, and used four per cent even.

I stated that the amount charged to construction for supply expense was $331,724.00. As a matter of fact, there was more than that amount of money charged to supply expense for construction, but I found in analyzing this account that there was a certain amount set up for what we call supply adjustment, which covers roughly, fluctuation in prices, depreciation of supplies, and some other items that I don't recall at the present time; but in considering this particular item of supply adjustment, I felt that there were at least part of the items that should not properly be included in order to determine the proper percentage of supply expense to load on to the material cost for reproducing the property. There were some of the items that should properly be included, but in order to be safe, I eliminated the total supply adjustment from the supply expense. Had I included that, the percentage would have been higher.

Q. Where you speak of supply expense in connection with your appraisal, that means, the supply expense of what company?

A. The Ohio Bell Telephone Company.

[fol. 2021] Q. Do you include within that term the supply expense of any other company?

A. No, that is the actual experience, actual cost of supply expense to the Ohio Bell Telephone Company.

Q. Proceed.

A. Coming to the next item of the unit costs I had in mind the same thought that I stated in regard to central office telephone equipment, that one of the best indications of the cost to reproduce property as of a given time or date was what it was actually costing to produce, install or construct property of a similar nature and in about the

same locations. For this reason, I analyzed the actual construction costs of the Ohio Bell Telephone Company for exchange pole line labor for about two years prior to June 30th, 1925 and for all of 1925 available. That is, I went to the records of the various jobs showing the actual construction costs for all of the items set up separately for material, labor, sundry expense, freight and cartage and so forth and drew those items off. I then analyzed the various jobs for which these records were set up for this period and where I found any jobs that were small or any jobs that reflect abnormal costs, I threw them out, endeavoring to obtain as nearly as possible a normal labor cost for pole line construction.

From these actual costs I was able to draw off the constituent elements totaling over $881,000.00 for pole line construction. I next drew off the items of material corresponding to this $881,000 of actual pole line construction costs. I had in my department also a set of tentative unit costs, built up originally on the man-hour performance [fol. 2022] basis; that is, construction gang set-up with the average amount of work that would be done by a typical construction gang for a particular type of work.

Q. You now are referring to pole line construction, are you?

A. I am particularly at the present time. Those costs have been modified from time to time throughout the period of six or seven years that I have been with the Ohio Bell Telephone Company and its constituent companies, each time being modified so as to reflect the actual construction costs as experienced by the Ohio Bell Telephone Company or the constituent company with which I was dealing for that particular time; in other words, these modifications had been made from time to time in accordance with actual construction costs, so that when I came up to the tentative costs that I use for June 30, 1925, I had available a set of tentative costs that originally had been on a man-hour basis, but which had been modified, reflecting not only the changes in wage scales subsequent to that time and also changes in efficiency and other factors.

Q. Changes up to June 30, 1925?

A. Well, they were not changes of that date up till after I had compared them with this last volume of work that I drew off.

Q. Yes, I am a little ahead of my story?

A. They were brought up and changed to about I think January 1st, 1924, the last time.

Q. Yes.

A. So that they were not very far out of line even at the date I used them, but using that tentative set of unit costs for labor and incidentals, I priced out all of the various [fol. 2023] items of material that I drew off corresponding to this $881,000.00 of actual construction costs. The $881,000.00, by the way, was the total cost of material, labor and various other items. After I had priced out these items, on the tentative unit costs, I compared the total that I got with the actual money expended for these particular jobs for pole line construction; that is, the actual amount expended for labor and incidentals. I then modified my tentative unit costs by the factor determined as the relation between the total found by pricing out on the tentative costs and the actual total experienced on the jobs, and priced out that or modified tentative costs again. The result was that I got precisely the same amount of labor for the items contained in the jobs as the amount that was actually expended by the company for that labor. In other words, I took the tentative set of unit costs which had been modified so that they were very nearly up to date and modified them again so that it reflected costs which would exactly correspond with a large volume of actual construction costs experienced by the Ohio Bell Telephone Company in a period partly prior to and partly subsequent to June 30, 1925.

The next item was that of plant supervision and tool expense. I have treated plant supervision and tool expense together in determining my costs to be used in this appraisal for the reason that both plant supervision and tool expense bear a certain relation and are both distributed between maintenance and construction in relation to labor expenditures.

[fol. 2024] Analyzing the reports of actual costs to the Ohio Bell Telephone Company for the year 1924, I found that the company had expended for construction labor a total of $2,940,893.00; that they had expended for plant supervision and tool expense applicable to construction labor $663,469.00, or a percentage relation of 22.56 per cent.

I used in this connection 22.5 per cent.

The plant supervision expense covers the salaries, and expenses of plant supervisory officers who have charge of the construction and installation of telephone property.

The tool expense covers the cost of tools that are worn out, lost or stolen in the construction of telephone property. Both the figures that I have quoted for plant supervision and toll expense are those proportions or amounts which are applicable to the construction expenditures and have had eliminated from them the amounts properly associated with maintenance.

Mr. McConnaughey: When you say the construction of telephone property, are you confining that to the pole lines now?

The Witness: As an example, yes; as a matter of fact, having derived my plant supervision and tool expense and my supply expense for all accounts from which those items are applied and having obtained an average per cent, which has a relation to the expenditures on all of this class of accounts to which they properly apply, I then applied that same percentage in my appraisal to all accounts to which they are properly applicable. Having obtained each one of the different elements of the unit costs in the manner [fol. 2025] described, I added all of the items up for all of the elements in order to get the total unit cost for each particular item. For instance, under the pole line account, and applied each one of the separate individual unit costs to the total quantity of the particular item to which the costs should apply.

Now, at the bottom of the pole line account, I have listed the minor items which I have already discussed; relative to the manner in which the quantities were determined for the minor items. Consideration has been given and the items have been priced out for the minor items in exactly the same way as they have been priced out for the major items; that is the material costs for these minor items have been obtained from the price lists; the labor costs were thrown in and included with the major items themselves in the derivation of the final unit costs, and the factor to be used to modify the tentative unit costs; the plant supervision, tool expense and supply expense have been applied to the proper amount for the minor items in exactly the same way as I have described for the major items.

Q. How did you arrive at the amount shown in your appraisal for exchange aerial cable?

Mr. McConnaughey: Just a minute, may I ask a question there?

Mr. Burr: Yes. I will withdraw the question.

Mr. McConnaughey: What did you do with pavement as a minor item in connection with pole line there; what is that "pavement setting"; is that setting in pavement? [fol. 2026] The Witness: That is just a small factor for poles that are——

Mr. McConnaughey: Set in paved streets?

The Witness: Yes, over what the cost would be if they were only set in earth.

Mr. McConnaughey: I see.

Mr. Burr: Have you any further questions?

Mr. McConnaughey: No, that is all.

Q. Consider next, if you please, the item of exchange aerial cable and tell the Commission where the detail of that item is to be found in Williams' Appraisal 7-B and what is the source of the quantities used, the reasons for the classification in this and the determination of the average type and average amounts of miscellaneous items for major units of class?

A. The quantities, as were the pole lines, were determined or obtained from the original field inventories plus the net additions from the records, supplemented with the field checks, during the year 1925, as I described for the pole lines. The reasons for the classification set-up are similar to those already set up for the pole lines; also in connection with the determination of the average amount and average type of each miscellaneous item per foot of cable, I had available in the field inventories the full details covering 11,292,568 feet of cable in the exchange aerial cable account. The company-wide inventory includes 18,197,614 feet of exchange aerial cable or in other words, I had available better than 60 per cent of the detail on minor items that was sustained in the company-wide appraisal. At the time that the company-wide appraisal was [fol. 2027] made up, we had available the detail for both the major and minor items for all of the field inventories outside of Cleveland; we also had them for Cleveland on the pole line property. Now, on the other accounts the summaries had at that time not been made, but even excluding, the Cleveland property, we had available over 60 per cent. This 60 per cent was used to determine, as with the

pole lines, the average type and the average amount of each of the miscellaneous items particular to the cable. These miscellaneous items for the exchange aerial cable account are such items as flight messenger, potheads, pothead supports, bonds, guards, dip laterals and so forth. The costs for the exchange aerial cable were determined in the same manner as the costs for the exchange pole lines; that is — the material part of the costs was taken from the price lists and in connection with the labor costs, I analyzed the actual construction costs to the Ohio Bell Telephone Company for placing exchange aerial cable to the extent of $818,721.00, partly prior to and partly subsequent to June 30, 1925.

Q. You refer to price lists; what price lists do you mean?

A. The price lists mainly of the Western Electric Company covering that type of cable and terminals, manufactured by the Western Electric Company; but wherever there were types of terminals manufactured, why independent companies, such as Kellogg or other independent companies, we used the independent companies' prices.

Also I used the independent companies' prices on 20 [fol. 2028] gauge cable because the Western Company does not manufacture at the present time and has not manufactured for some years past that I know of any 20 gauge cable. We used Kellogg prices on the 20 gauge cable.

The tentative unit costs were modified exactly as in pole lines so as to reflect the actual construction costs for labor included in this $818,721.00, of actual construction costs of exchange aerial cable experienced by the Ohio Bell Telephone Company. They were so modified that when the quantities of material covered by these particular jobs used were priced out again, we got precisely the same figures as those actually experienced for those particular jobs.

In this connection, I might also say, as I think I have already stated in regard to both pole lines and central office telephone equipment, that I threw out the smaller jobs, or any jobs that upon analysis indicated to me that they represented abnormal construction costs; in other words, what I was trying to get at was to obtain enough actual costs to represent normal costs of reproduction for the particular type of property that I had under consideration.

Q. To what extent does your last answer apply to the other items comprising the distributing system?

A. That applies entirely and wholly to all of the other accounts.

Q. Proceed?

A. The plant supervision expense and the tool expense and the supply expense are loaded in the same manner as already described for the pole line account, obtained from the same source and I have used the same percentage because as I stated I obtained a general percentage for all [fol. 2029] accounts to which those percentages were properly applicable. I don't think that I gave the total amount for the exchange aerial line account.

Q. I was about to ask you what in your judgment is the reproduction cost new of the exchange aerial lines covered by your appraisal as of June 30, 1925?

A. $11,295,157.00, exclusive of all construction overheads.

Q. And what is the reproduction cost new in your judgment of the exchange aerial cable covered by your appraisal as of June 30, 1925.

A. $9,709,537.00, exclusive of all construction overhead costs.

Q. Take up next if you please, the item of exchange aerial wire stating first the source of the quantities used in the appraisal, and second, the reason for the classification used there, the determination of the average type and average amounts of miscellaneous items for major units of plant and after that you may discuss the unit costs used?

A. The quantities were obtained from the actual field inventories plus the record net additions from the dates of the field inventories.

In order to arrive at the mileage of each kind of wire, we of course did not measure all of the wire in the Ohio Bell Telephone Company's plant. It is the usual procedure and the procedure adopted in each case, to measure a certain number of spans — each particular kind of wire.

In connection with the various field inventories taken, we took the number of spans in the field of each kind of wire in each inventory or in the inventories of each exchange. We also took span measurements on 54,091 spans [fol. 2030] of wire, that is actual tape line measurements, walked and measured for each span. From these span measurements we obtained an average span length for each

type of wire. These span measurements were then applied in the total number of spans for each type of wire.

The drop lengths and classifications of the drops I will discuss in connection with the unit costs. The method of determining average type of average amount of each of the miscellaneous items associated with the major items is exactly the same as that described for pole lines, except that the percentage or amount or value, the cost of the miscellaneous or minor items is much smaller in comparison in the wire account than it was in either the pole line or cable account. The reason for that is that about all of the miscellaneous items not usually shown or not usually included in the unit costs for the major items are those items of bridle rings, cleats, standard aerial conduit rings and messenger supports, and minor items of that kind; they represent a very small percentage of the aerial exchange quantity. In order to obtain a proper percentage of these associated minor items, we had available from the detailed field inventories all of the minor items in connection with 67,569 miles of exchange aerial wire. There are included in the company-wide inventory and appraisal, 76,709 miles of exchange aerial wire or in other words, very close to 90 per cent as much wire in the detailed field inventories on which we had the miscellaneous items as there is included in the company-wide inventory. In connection with the unit costs, the material prices were ob- [fol. 2031] tained from the same source as those already discussed for exchange pole lines and exchange aerial cable. The labor costs were also obtained from the analysis of the actual construction costs experienced by the Ohio Bell Telephone Company for a period partly prior to and partly subsequent to June 30, 1925, and covered the actual construction costs of exchange aerial wire to the extent of $587,561.00.

The method of determining the labor costs was similar to that discussed of the pole lines and cable, by the use of a tentative set of unit costs and modification of this tentative set of unit costs to bring them in accord with the actual cost experienced by the company on the particular jobs analyzed.

Q. How nearly did these costs taken prior to June 30, 1925, and those taken subsequent give you in your judgment the cost current as of June 30, 1925.

A. They gave me the cost that I would be willing to say

was as close as I could get to that cost without pricing out everything brand new in all of the detail; in other words, I would say that they were better than 99.9 per cent accurate.

In connection with the plant supervision, tool expense and supply expense, that we obtained from the same source and applied in the same manner as that discussed for the pole lines and the exchange aerial cable. In regard to the drop wires——

Mr. McConnaughey: Just a minute before you go to that; what are those figures in the first column on page 9; does that represent the size of wire?

The Witness: It does in decimal of an inch.

[fol. 2032] Mr. McConnaughey: That is the average size?

The Witness: No, that is the exact size.

Mr. McConnaughey: The exact size?

The Witness: The exact size.

Mr. McConnaughey: All right.

The Witness: Wire comes both iron wire, copper wire and twist pair plate comes in certain specific sizes and those sizes, while we used to represent them in terms of different companies' gauges, are now all handled on the basis of a decimal of an inch.

Coming now to the drops listed on page 10, I have listed these drops as the total number of drops, giving the average type as 17 twist pair copper steel. I had available a considerable amount of measurements taken several years ago relative to length of drops and also indicating the type of drops. However, that information as I say was taken several years ago. I also had available from the actual record the installation of new drops for the first eleven months of the year 1925; the detail not only as to the cost of drops, but also as to the number of drops and the type of drops. Analysis of these actual costs and the associated data relative to drops for the first eleven months of 1925 show that there were installed new drops in the State of Ohio to the extent of 47,012 drops which number was considerably more than I had available in my prior measurements to which I have already referred.

The amount of money expended for labor and material for these drops was $189,878.00. I indicated the average drop as being a number 17 twist. The information taken [fol. 2033] from the detailed field inventories showed that if I recollect correctly, about 80 per cent of all of our jobs were

the 17 twist jobs. The analysis of the drops taken from the records show that of the total number of drops added, almost 99 per cent were the 17 twist drops; both of which sources of information substantiate my listing of 17 twist drops as being the average type. Also from the information available for the year 1924, I found that the average drop length on 58,235 drops, repres-nting 7,251,374 feet of drop wire—the average length was 125 feet. The total amount of money represented my best judgment for the cost to reproduce ne as of June 30, 1925, for account 243, exchange aerial wire, was $5,096,509.00, exclusive of all construction overhead cost.

Mr. McConnaughey: Didn't you read the wrong figure there? You read the total for exchange aerial wire.

The Witness: What did I say it was?

Mr. McConnaughey: Drop wire.

The Witness: Please repeat my statement there, Mr. Stenographer.

(Previous answer read.)

Mr. McConnaughey: I beg your pardon; your translation was too quick.

Q. And that was arrived at being cost as of what date?
A. June 30, 1925.

Chairman Marshall: We will recess at this time until ten o'clock tomorrow morning.

[fol. 2034] And thereupon the further hearing of this matter was adjourned until Wednesday Morning, January 13, 1926, at 10:00 o'clock A. M.

[fol. 2035] Wednesday Morning Session,

January 13, 1926.

And thereupon the further hearing of this matter was resumed pursuant to adjournment.

Present:

Hon. George T. Poor and Hon. F. B. Maullar, Public Utilities Commissioners.

Carl E. Burr, S. H. Tolles and C. S. Maltby, on behalf of the Ohio Bell Telephone Company.

W. S. McConnaughey and Fred W. Postle, Special Counsel, on behalf of the State of Ohio.

Henry M. Hagelbarger, Director of Law, Counsel for the City of Akron, Ohio.

[fol. 2036] And also GEORGE B. WILLIAMS, resuming the stand, continued his testimony as follows:

Examined by Mr. Burr:

Commissioner Poor: You may proceed, gentlemen.

Q. Mr. Williams, at the close of yesterday's hearing, you had finished your discussion of the portion of the distributing system comprised of the items exchange aerial wire; will you please take up the other items comprising the distributing system and tell the commission how you arrived at the amounts for those several items as shown in your appraisal, the discussion being now directed particularly to Williams' Exhibit Number 7-B and in so far as is possible, will you combine your testimony with respect to such items as admit of such combination?

A. The next account covered in Williams' Exhibit 7-B is exchange underground conduit, found on pages 11 to 44 of that exhibit. The quantities included in the appraisal were obtained from the same sources as those already discussed with the other accounts, being the field inventories plus the net additions up to June 30, 1925, supplemented with field checks.

The average type of formation for the different sizes of conduit items, and the average type and average quantity of the minor associated items were obtained in the same manner as that already discussed for the other accounts.

We had available from the detailed field inventories the actual formations on 1,217,521 feet of underground conduit [fol. 2037] and in the company-wide inventory there are included 3,331,623 feet of exchange underground conduit. From this 1,217,521 feet were able to obtain the average formation for each size of duct run, the average number of associated items, also, from the field inventories we had the full detail relative to the type of construction, that is, whether brick, concrete or what, and the actual sizes for manholes to the extent of 3,322 man holes. In the company-wide inventory, there are included 8,433 man holes——

Q. Just a moment.

A. (Previous answer read.) In this connection the minor items or associated items bear a relatively small per cent to the major items. From computations there is 2.07 per cent.

Q. 2.07 per cent of what?

A. 2.07 per cent of the major items.

Q. That is to say, the minor items are that proportion to the major items?

A. Correct.

The unit costs were obtained from the same source as already described for the other accounts; that is, the material items from the pricing lists; the labor costs from an analysis of actual construction costs of over $700,000.00 costs as experienced on jobs by the Ohio Bell Telephone Company in the State of Ohio partly prior to and partly subsequent to June 30, 1925.

Q. Mr. Williams, as you proceed with the testimony, if there are any cases in which you did not use material prices and labor prices current as of June 30, 1925, will you please so indicate, with the understanding that if you do not so indicate you refer to material and labor prices current as of [fol. 2038] June 30, 1925.

A. I will do that. The plant supervision expense, supply expense and tool expense were obtained from the same sources as described for the other accounts, that is from the actual expenses for those items as experienced by the Ohio Bell Telephone Company. Now, in regard to——

Q. When you say expenses, do you mean costs?

A. Costs applicable particularly to construction expenditures.

Q. Yes.

A. In regard to the item of paving, I have gone on the theory that in order to reproduce this property it would be necessary to construct all of the existing paving over conduit. In this connection, to obtain the amount of paving over the various kinds of conduit, as of June 30, 1925, I have taken into consideration that we have the detail relative to the different types of paving as found in the field inventories, from actual field inspection, to the extent of 532,731 square yards. There is contained in the company-wide inventory as of June 30, 1925, 567,012 square yards of paving over conduit. The method by which the conduit as of June 30, 1925, was arrived at was on the basis of the percentage relation of paving to trench feet of conduit, and also the

distribution as between the various types of paving was on the same basis.

In this connection in our field inventories, we had available the total length of trench covered by the different types of paving, but of course were unable to obtain the exact width measurement that would have to be cut through in order to reproduce that particular type of paving, so that for instance, on the main trench I allowed a duct width, an [fol. 2039] average duct width of 3 ducts, which would be in the neighborhood of 1.962 feet wide. That would be about 23 inches for the average width, which in my judgment, is, to say the least, rather conservative.

On the subsidiary conduit we used an average width of paving of 1.58 feet; in other words, that would give about 19 inches width for the pavement to be cut through to reproduce the subsidiary conduit.

The man holes, I used an average——

Q. What about your judgment in respect to that last width?

A. I think that is very conservative also.

On the manholes we used an average of 2.45 square yards per man hole, which I think is also conservative.

As I have already stated, the total paving is allowed on the theory that in order to obtain the cost to reproduce new, it would be necessary to cut through this paving, all of it that is over a conduit, before it would be possible to reproduce the conduit which is underneath.

Mr. McConnaughey: We object to the proof of the cost of paving on that basis.

Commissioner Poor: The objection will be overruled. That is their theory of the cost.

Mr. McConnaughey: Well, the objection that I make is that it does not distinguish for the purposes of the record between what is proper as having been actually installed or cut through by the company and what has not been, so that it is not proper to apply the theory against what has not been cut or installed by the company. Upon the basis of this record, I think they should distinguish [fol. 2040] between the two in proving their case. Otherwise somebody else has got to go back over it that does not have the facilities for determining the facts, and try to prove what the facts are, whereas, the burden is upon them under the present state of the law, I am sure.

Mr. Tolles: Well, if the Commission please——

Commissioner Mauller: Off of the record.

Mr. Tolles (continuing): When you come to fix a valuation on the property that is a condition and it is a thing which can be brought out afterwards; when you are proceeding to ascertain on the reproduction theory what the cost new would be to construct, it seems to me this item is as proper as any other. What we are getting at now is what would be the cost to reproduce this property at the present time. It would not cost any less now to reproduce it because in earlier years we constructed some which did not involve that.

Mr. McConnaughey: The point is just this, that the paving which has not been installed or cut through by the company is not recognized by the authorities nor by this Commission in its previous rulings as a part of the reproduction cost in the rate base, and what they should prove here at this time is the property that they are entitled to have a value in this proceeding and the value of that property.

Now, they have included here without any marks of distinction at all certainly a vast amount of property that they are not entitled to put into the rate base under these rulings and to simply put that in that gross figure without any distinction at all leaves no basis for the commission [fol. 2041] to determine the fact that it must determine with reference to this particular feature.

So that their evidence is not complete and there is not any basis for a value at this time. I think that ought to be ruled out now.

Commissioner Poor: The objection will be overruled. This is merely the company's theory on which they have arrived at the valuation, but whether the Commission accepts that theory or not is for the Commission to determine.

Then the other feature in there as to what amount has been actually cut through by the company in building its present plant, might be on cross-examination, if the company does not voluntarily bring it out on its direct testimony.

Mr. Hagelbarger: And we will claim if the Commission please, that the burden is on them, the company, to show the amount that they did actually cut through, and not on the cities nor the state.

Commissioner Maullar: Can't that be brought out in cross-examination?

Mr. McConnaughey: It is part of their case.

Mr. Hagelbarger: It is none of our business to bring out what they are required to prove.

Mr. McConnaughey: All part of their case.

Commissioner Poor: We will give you an exception.

Mr. McConnaughey: Note exception please.

The Witness: The total amount arrived at for the cost of the underground system as shown on page 44 here $13,244,049.00 which is exclusive of all construction overhead costs.

Q. And that amount represents what?

[fol. 2042] A. My best judgment as to the cost to reproduce new as of June 30, 1925.

Taking up next the exchange underground cable which is found on pages 45 to 61 inclusive, the quantities contained in Williams' Exhibit Number 7-B were obtained from the same sources as that already discussed for the other accounts, namely, the detailed inventories plus the net additions from the record, supplemented by field checks. The average amount and average type of associated miscellaneous items were arrived at in the same manner as that already discussed for the other accounts, there being available in the detailed field inventories the full detail on both major and minor items to the extent of 3,119,384 feet cable, as against 8,263,053 feet shown in the company-wide inventory.

Material costs were taken from the same source as that discussed for the other accounts. Labor costs were taken from the same source, that is the actual construction cost to the company for labor experienced both prior to and subsequent to June 30, 1925, there being analyzed also construction costs for this purpose to the extent of $1,172,072.00.

Q. Where you say that you have analyzed various costs in order to arrive at the unit costs for these various items; after your analysis what use did you make of the result of that analysis?

A. I modified my tentative unit costs so that they were in accord with the actual costs experienced by the company.

Q. Proceed?

A. The plant supervision expense, tool expense and supply expense were taken from the same source as that described for the other accounts, namely the actual experi-
[fol. 2043] ence of the company in these items. The total for the exchange underground cable account is as shown on page 61 of Williams' Exhibit 7-B $12,041,301.00. This figure represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all construction overhead costs.

Q. What have you to say with respect to the associated items referred to on page 61 of that account?

A. These are the associated items that I have been referring to for which we have the detail available and which were taken into consideration in arriving at the original unit cost for each item.

The next account is that of exchange submarine cable shown on page 62. The quantities for this item were arrived at by detailed field inventories plus the net additions taken from the records. There is no allowance made for any miscellaneous associated items connected with exchange submarine cable. The unit costs for material were taken from price lists and labor, inasmuch as this is a minor account, is frankly estimated; that is, I took into consideration what I considered necessary in the way of a dredge, dredging a channel, covering pay, besides necessary men and made the estimated figure for the expense. Plant, tool and supply expense is arrived at from the actual experience of the company as in the other accounts.

The total for this account is shown on page 62 as $19,729.00, which represents my best judgment as to the cost to reproduce new as of June 30, 1925, inclusive of all construction overhead costs.

[fol. 2044] Q. What have you to say with reference to the associated items shown on page 62 for that item of plant?

A. I think I have already stated that I made no allowance whatever for those items?

Commissioner Poor: The only submarine cable you have in is up at Sandusky?

The Witness: No, we have some at Sandusky, some at Toledo and some at Cleveland. Those are the only three that I think of.

Mr. Tolles: We have to go across the river at Cleveland.

The Witness: The next account is that of toll pole lines shown on page 63. The quantities for the toll pole lines were taken from the detailed field inventories plus the record net additions. The reasons for my classification and the method of determining the average type and average amount of associated miscellaneous items per major item are the same as that described for the exchange pole lines. I had available for this purpose the detailed field inventories both of the major items and the minor items to the extent of 295,877 poles. There are included in the company-wide inventory only 231,956 poles. The reason for this difference or rather the reason for the excess number of poles in the detailed field inventories is due to the fact that the field inventories, having been taken on an average of possibly two or three years ago, considerable unification and elimination of parallel pole lines has taken place, since that time, so that the balance reflected in the company-[fol. 2045] wide inventory are only those toll pole lines which are in use and which it is the intention of the company to retain.

In this connection, also, I had available the full detail for major items and minor items on toll cross arms to the extent of 505,874 cross arms, while in the company-wide inventory there are 432,451 cross arms. The reason for the excess in the field inventories is due to the same reason as that already described for the poles.

The unit costs are obtained from the same source as that already described for the other accounts, the material costs being taken from the price list and the labor cost obtained by an analysis of actual construction costs of the company experienced by them prior to and subsequent to June 30, 1925.

For this purpose, I analyzed actual construction costs to the extent of $394,573.00.

I also had——

Q. Costs incurred——

A. Incurred by the Ohio Bell Telephone Company.

Q. At what time,

Mr. Tolles: Was that dollars or cross arms,

The Witness: Dollars. Incurred then by them prior to and subsequent to June 30, 1925.

In this connection, also, I was fortunate in being able to secure jobs that were exclusive or almost exclusive construction of toll cross-arms to the extent of over 10,000 cross arms, so that I was able to obtain a very good cost [fol. 2046] on pole cross-arms.

The plant supervision expense, tool expense and supply expense of this account is obtained in the same manner as that for the other accounts, being taken from the actual experiences of the company for the year 1924 for these items.

Q. You have not yet given the amount for the item of toll pole line,

A. No, not yet. The total amount arrived at for toll pole lines is as shown on Page 63 $7.710,121.00, which represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all construction overhead costs.

The next account appearing in the appraisal is that of toll aerial cable which is to be found on pages 63 to 70 inclusive, of Williams' Exhibit 7-B.

The quantities are obtained in the same manner as for other accounts, being from the detailed field inventories plus the net addition from the records. The determination of the average type and average amount of associated miscellaneous items for each of the cable- are obtained in the same manner as that already described for the exchange aerial cable.

Q. When you speak of the associated items, you mean those listed in the appraisal at the end of the——

A. Account.

Q. Portion of Williams' Exhibit 7-B showing that account.

A. That is right. The unit costs are obtained from the same sources as that already described for exchange pole lines with the exception of loading cases, that is the labor [fol. 2047] loading cases which is an estimated figure. I have estimated the labor if I recollect correctly at $10.00 per loading case; that is to cover the hauling, the cost of the truck, lifting, placing, the men and derricks or block and tackle or whatever is necessary—whatever happened to be necessary to erect the loading cases.

Q. On what is the estimate based?

A. It is based on what information we had in the office

and what information I could get from conferences with plant construction and plant engineering people. The item is not large and I did not go into any considerable amount of time and expense to arrive at the cost.

The plant supervision expense, tool expense and supply expense is arrived at for toll aerial cable as already described in that of the other accounts, being taken from the actual experience of the company for the year 1924, relative to these particular costs.

Q. The year 1924?

A. That is right.

The total for toll aerial cable is shown on page 69, being $601,140.00, which represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all construction overhead costs.

The next item shown is——

Q. Just a moment, Mr. Williams. Throughout your appraisal, there are instances wherein you refer to various classes of property and after the various classes there are brackets and inside of brackets are the initials of various [fol. 2048] companies, such for example as O. B. T. Co., A. T. & T. Co., P. T. Co. and other similar designations; tell the Commission what those designations mean.

A. Those designations indicate the company owning a joint proportion of that particular cable or conduit, for instance the A. T. & T. indicates the American Telephone and Telegraph Company; the O. B. T. indicates Ohio Bell Telephone Company; and the percentages opposite each one of those whether they be for the Ohio Bell Telephone Company or some other company, or whether they refer to toll or to exchange, indicate the percentage of ownership of the Ohio Bell Telephone Company and also where toll exchange is considered in the exchange accounts, indicates the exchange proportion, and in the toll account indicates the toll proportion. I might also say in this connection that where there is an item of joint cable or joint conduit set up, that the unit cost is only the Ohio Bell Telephone Company's proportion of the total unit cost or in case of toll and exchange usage, in the exchange accounts, it is the exchange proportion of the unit cost and in the toll accounts it is the toll portion of the unit cost.

Q. In other words, where the percentage of ownership in the Ohio Bell Telephone Company is something less than

100 per cent, you have included in your appraisal as to the part of the property owned by the Ohio Bell Telephone Company only its proportion as shown in these different pages?

A. Not only in the reproduction cost new column, but also in the unit costs column.

[fol. 2049] Q. Yes.

A. I have split up the unit cost shown in the unit cost column, only that proportion owned by the Ohio Bell Telephone Company or in case of joint toll and exchange usage, only that proportion properly applicable to the account under consideration.

Q. Does that apply to all the accounts in your exhibit?

A. It does.

Mr. McConnaughey: Toll conduit.

The Witness: It does, and conduit and to cable. The poles, as I think I have already explained—poles are taken on the basis of, for instance, on joint ownership we have included only the Ohio Bell Telephone Company's proportion in terms of fully owned poles; that is unit poles; they have been reduced to total poles and the Ohio Bell Telephone Company's various percentages then show units or entire poles.

Mr. McConnaughey: So that this inventory does not include or does not show any joint ownership on its face?

The Witness: On its face relative to poles, no, it does not.

Mr. McConnaughey: But that has been worked out.

The Witness: It is in the same manner that we have considered it in all of our exchange rate cases.

Mr. McConnaughey: Let me ask you right along that line, turn to Page 64, at the bottom or near the bottom, you have, "22 quad" and "8 quad" "O.B.T. 36.36 per cent 14," I suppose that is "quad"—"Qd."?

The Witness: That is right.

Mr. McConnaughey: "A. T. & T." How would you inter-

[fol. 2050] pret that?

The Witness: I would interpret that to mean that the Ohio Bell Telephone Company's proportion of that total of cable was 36.36 per cent and that percentage is arrived at by working out the total metallic cross sections contained in the cable on the basis of the proper cross section owned by each company. That is done for each joint cable.

Mr. McConnaughey: What does the "8 quad" and "14 quad" mean there?

The Witness: That means 8—4 wires—quad means four; they are put up in a special form and twisted in a special manner for use for toll transmission.

You will also note in that connection, Mr. McConnaughey, that both the regular pair cable and the quad cable are included under the general classifications of the gauge of the cable; for instance, beginning at the top of that column on page 64, you have a classification covering several sizes of cable to 13 B. & S. gauge.

Mr. McConnaughey: Yes.

The Witness: And the next general classification is 14 B. & S. and the next is 16, beginning with the largest sizes and running down.

Mr. McConnaughey. And that includes both pairs and quads?

The Witness: In some cases it does, yes.

Mr. McConnaughey: And in that case that I was just asking you about, that group there, 16 B. & S. gauge includes both pairs and quads?

[fol. 2051] The Witness: Oh, yes, that is right.

Mr. McConnaughey: But to come down to that item before you now, you have 22 gauge?

The Witness: That is quad cable only.

Mr. McConnaughey: Yes, I understand; what I don't understand is how you use that 18 and 14 to your 22.

The Witness: Well, 22 means that there are 22 quads; if you will add your 8 and 14 together, you get 22 quads.

Mr. McConnaughey: Yes.

The Witness: Now, out of those 22 quads, 8 belong to the Ohio Bell and 14 quads belong to the A. T. & T.

Mr. McConnaughey: Yes.

The Witness: That is the meaning of the 22 and the 8 and 14.

Commissioner Poor: And the 8 quad is 36.36 per cent of the 22?

The Witness: Not necessarily in every case. It would be in this particular case because all of both kinds of cable, that is both quads are 22 gauge, but where you have for instance in some particular composite cables, some pairs may be a 13 gauge or 16 gauge; you may have some quads then of another gauge; in other words, you may have both pairs

and quads and part of them may be one gauge and part of them another and for that reason your percentage will not always work out by simply taking the number of pairs or quads that either company owns. As I said a while ago, you have got to take into consideration the metallic cross [fol. 2052] section for the actual sizes and amounts owned by each company.

Mr. McConnaughey: Well, where they were all grouped under one—under one heading, as 16 gauge, that would be true, wouldn't it?

The Witness: Yes, that would be true. You come into the other situation when you come back down on the next page to composite.

Q. That answers Mr. Commissioner Poor's question——
A. Yes, sir.
Q. Because in this particular case——
A. That is true.
Q. All the sizes of the wires are the same?
A. That is true.

I think I gave the total for the toll equipment, did I not—$601,140.00.

Mr. Postle: Yes, you gave that at page 69.

Q. Wait a minute. In order that the reporter need not go back, what does that amount represent?

A. It represents in my best judgment the amount of cost to reproduce new as of June 30, 1925 exclusive of all construction overheads.

Q. The next item is that of toll aerial cable?
A. No, I have just finished that.
Q. Or take that out—toll aerial wire. Where is the detail of that item to be found in Exhibit 7-B?
A. Pages 71 and 72.

The quantities for toll aerial wire are taken from our circuit records and check with the circuit maps. There is no [fol. 2053] miscellaneous material allowed for toll aerial wire. The unit costs are obtained by the same sources as that already described by the other accounts, the material being from the price list and the labor being taken from the analysis of actual construction costs for toll aerial wire to the extent of $293,612.00.

At the bottom of the account is shown an item of phantom circuit material. This represents in the unit cost opposite

the item of "phantom circuit material" only the material costs involved in outside construction of phantom circuits, such as the phantom transposition brackets, bolts and so forth.

The labor costs for the item phantom transpositions, are included in the labor cost for phone wire; that is they were included in there in the costs actually analyzed by the company and of course I could not include anything else under the item of phantom circuits.

The plant supervision expense, tool expense and supply expense is obtained from the same source as that already described by the other accounts, being from the actual costs for those items to the Ohio Bell Telephone Company for the year 1924. The total shown for this account is on page 71 amounting to $4,351,642.00, which represents my best judgment as to the cost to reproduce new as of June 30th, 1925, exclusive of all construction overhead costs.

Q. When you say that there are no miscellaneous items which you have taken into consideration in respect to this class of plant, do you mean no associated items?

[fol. 2054] A. That is what I mean. That really results in the omission of those items shown on Page 72 of Messenger cable rings, bridle rings, clamps and bolts, loading cases, supports high tension crossings, and underground dips.

Q. Why didn't you take those into consideration?

A. For two reasons as I recollect now, one of them is I didn't feel that I had sufficient data available on which to base and the other was that the items are not of considerable consequence. There should be some value added and the appraisal is conservative to the extent that it was not.

Q. Does the same answer apply to the other cases in which you have omitted to take into consideration the miscellaneous or associated items?

A. It does.

Q. Proceed?

A. The next account is that of toll underground conduit shown on Page 73 for which the quantities were taken from the same sources as that already described, that is from the field inventories plus the net additions and subsequent checks; and the costs used are precisely the same costs as those used for exchange underground conduit of similar type. The total arrived at is as shown on page 73 $45,695.00, which represents my best judgment of the cost to reproduce

new as of June 30th, 1925, exclusive of construction overhead costs.

Q. What about the associated items with respect to this class of property?

A. They are necessarily taken in on the same basis as that for exchange underground cable because the same costs were applied.

Mr. McConnaughey: What is the meaning of that note at [fol. 2055] the bottom of the page: "These items are evaluated in the unit cost"—Oh, I get it. I withdraw that. You have that item in reference to associated items, where you have not taken it.

The Witness: You mean——

Mr. McConnaughey: Toll aerial wire on Page 72.

The Witness: That is right. That was rather cut from the stencils, or rather on the same basis as the stencils cut for the inventory; we endeavored to cut out all of those notations that would be changed owing to the change in the method of arriving at these units of cost from that which we had originally contemplated, but the statement at the end of the toll aerial wires is in error where it says that "These items are evaluated in the unit costs applicable to the major items."

Those costs for toll aerial wire are not included, as I have testified.

Mr. Tolles: Your statement is corrected in this?

The Witness: It should be.

Q. That is it should be corrected to conform to your spoken testimony?

A. Yes, that item or that statement should be just simply stricken out of Page 72 Williams' Exhibit B, that last statement at the bottom.

Q. Is that true with reference to any other?

A. That same correction should be made also for the item at the bottom of page 62 Williams' Exhibit B, the statement, "These items are evaluated in the unit cost applicable to the major items.", should be stricken out. No allowance was [fol. 2056] made for miscellaneous items on that account.

Mr. Tolles: Do you wish your statement corrected in that respect?

The Witness: I wish the exhibit corrected in that respect, yes, sir.

On pages 74 to 84 inclusive, appears the account "Toll underground cable". The quantities for this account were obtained from the same source as that already discussed, that is, from the detailed field inventories plus the record net additions. The method of arriving at the average type and average amount of miscellaneous items is the same as that already discussed for main exchange underground cable and the unit costs are arrived at in the same manner as that for main underground cable; that is material from the material price lists and the labor costs the same as that used for the main underground cable. The total for this account——

Q. What about the plant supervision, tool expense?

A. I had in mind that the total cost included that, but the plant supervision expense, tool expense and supply expense are taken from the same source as that discussed by the other accounts, namely, the actual experience of the Ohio Bell Telephone Company for the year 1924. The total for this account is shown on page 84 as $472,512.00, which represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all construction overhead cost.

The next account is that of toll submarine cables shown [fol. 2057] on Page 85. The quantities were taken from the field inventories plus the record net additions and the material prices are taken from price lists. The labor prices are exactly the same as those used for exchange submarine cable.

Q. What about the associated items both with respect to toll underground cable and toll submarine cable—is the statement in your appraisal at Pages 84 and 85 respectively correct with respect to those?

A. On the toll underground cable it is.

Q. Yes.

A. Inasmuch as I testified relative to the exchange submarine cable that no allowance was made for the miscellaneous factor and also inasmuch as I have just testified that I have used the same costs for toll submarine cable as for exchange submarine cable, the statement at the bottom of page 85 relative to toll submarine cable, that is to the effect that "These items are evaluated in the unit cost applicable to the major items", should be stricken from these 85 inasmuch as no allowance has been made for miscellaneous associated items.

Mr. McConnaughey: Mr. Williams, may I ask you a question. You stated here that you have used the exact labor costs.

The Witness: Yes.

Mr. McConnaughey: That is a different form of statement from what you have used with reference to items where you could work out the labor cost on the groups and those taken; is that a different method?

The Witness: In this particular case it is, because you [fol. 2058] recollect that I said this morning that on my exchange submarine cable, that it was frankly an estimate. Now, I have used the same costs on my toll submarine cable so that is just as frankly an estimate also.

Mr. Tolles: You wish your exhibit corrected in this respect, also?

The Witness: Yes, I think I stated, didn't I, that that should be corrected on Page 85.

Q. That is to say the last line on that page should be stricken out?

A. That is right.

The next item is——

Q. Did you give the amount?

A. I don't believe I did. Strike out that sentence I started.

The total for toll submarine cable is shown on Page 85, $12,652:00; which represents my best judgment as to the cost to reproduce new as of June 30, 1925 exclusive of all construction overhead costs.

The next item is that of right of way shown in considerable detail on Pages 86 and 87 and discussed in considerable detail in connection with the company-wide inventory.

To obtain the amount allowed in this item I have taken three per cent of the distributing system, exclusive of right of way and also three per cent of Account 233 interior block wires. This three per cent is based on the manner in which the Public Utilities Commission has been for some years past arriving at its allowance for right of way and which if my recollection is correct was originally arrived at from a study made by the Public Utilities Commission——

[fol. 2059] Mr. McConnaughey: You mean the Public Utilities Commission of Ohio?

The Witness: The Public Utilities Commission of Ohio. That is right.

The total amount shown on page 87 for this item is

$1,940,501.00, and represents what to my mind is a conservative cost to reproduce the right of way of this company, the Ohio Bell Telephone Company, as of June 30, 1925, exclusive of all construction overhead costs.

Q. What have you to say with respect to any increases or decreases in the costs experienced by the company recently with respect to securing right of way?

A. I feel certain that the costs are going up for right of way all the time, and——

Mr. Postle: That does not answer the question.

The Witness: Maybe I do not understand the question.

Mr. Tolles: I thought you answered it.

Mr. Postle: The question is what have you experienced.

Q. On what do you base your last answer?

A. On information I have received from construction and engineering supervisory people and on some records of costs I have seen during recent years.

Q. Do you know anything about the cost to the company in particular cases, covering the right to set poles in the highways in front of private owned premises?

A. I have seen such costs at various times; I do not at the present time recall any particular cases.

Mr. Burr: Now, may this go in the record. It is not an [fol. 2060] objection, Your Honors, it is a statement I would like to make. I will make it very short—with respect to the rising tide of right of way costs. We refer in passing to the case of Watson against the Ohio Bell Telephone Company, recently decided by the Supreme Court of Ohio in which it was held in substance that the erection of a pole by a telephone company in the highway in front of the premises of a private owner constitutes an additional burden upon this premises such that he is entitled to demand compensation for that right as a condition precedent to the erection of the pole by the company.

The case has been very recently decided——

Mr. Tolles: Last Spring.

Mr. Burr: Last Spring and I should like to make the statement for the record here although whether or not counsel will choose to accept it or not, depends upon them, as the result of that decision the telephone company finds itself confronted not only with heavy demands upon it for

the right to set poles where the right is being sought, but also the right to continue poles in their present location is being questioned by property owners; and they are seeking compensation for that.

Commissioner Poor: But this is all since June 30, 1925?

Mr. Burr: No.

Mr. Postle: What do you claim for that so far as this inventory is concerned?

Mr. Burr: We claim that it bears directly upon the value [fol. 2061] of our right of way and that it reflects more than that upon the cost to secure that right of way at this time with the law as it now is.

If I may proceed for a moment, the prices asked by property owners for the right to set a pole runs from 30 to 60 to 100 dollars a pole, and we believe that this situation reflects very materially upon the value of the right of way which the company has.

Mr. McConnaughey: I move that that statement of counsel be stricken out. If that is a fact, if it is relevant here, it ought to be proven in the regular way.

Commissioner Poor: It will be sustained.

Mr. Burr: Note an exception.

Mr. McConnaughey: And we do not believe that the methods that they have adopted here of proving the value of the right of way is a proper method. It is an arbitrary percentage that does not reflect the experience of the company and no statement has shown any experience of costs, that is specific or that can be related in any way to this three per cent.

Commissioner Poor: I sustained your motion and this last remark is an objection to this?

Mr. McConnaughey: To the proof of the right of way.

Commissioner Poor: That objection will be overruled.

Mr. McConnaughey: Note an exception.

Commissioner Poor: That is the company's theory. It is a matter for the Commission to decide.

Q. What are some of the costs which you have taken [fol. 2062] into consideration in evaluating the right of way of the company?

A. Costs that would cover the actual payments to property owners for securing right of way, preparation and

filing of plans, negotiations with city engineers in connection with street openings, manholes, conduits and so forth; securing permission from property owners to secure cables or wires to buildings; securing permission from property owners to place poles, anchors and guys; negotiations with the State Highway Department in order to secure permission to place poles along highways.

Q. Are these all things which actually happened?

A. Absolutely, yes, sir.

Q. Proceed?

A. Preparation and filing of plans with the State Highway Department for the purposes just named and specifically, the costs to secure rights of way for the items named in Item Number K on Page 87.

Q. I think Mr. Williams that you have referred to this item at some length in some of the other previous testimony?

A. I have, in connection with the inventory.

Q. Tell the Commission whether or not that testimony applies with equal force today?

A. It does.

Q. Will you total your appraisal for the distributing system and say what the amount represents?

A. The total is as shown on Page 1 of Williams Exhibit 7-B being $66,540,548.00, which represents my best judgment of the cost to reproduce new the distributing system of the Ohio Bell Telephone Company as of June 30, 1925 exclusive of all construction overhead costs.

[fol. 2063] Q. The next major item of your appraisal is that of station equipment which will be shown on your summary sheet as Item Number 5. Will you please take up the discussion of that item, first tell the Commission where the itemization of it is to be found in Williams' Exhibit 7-B.

A. The summary is found on page 88 and the detail is found on pages 89 to 255 inclusive. The first subdivision of the station equipment item is that of station apparatus shown on page 89.

The quantities of station apparatus are taken from our monthly station report which is a record of the number and kinds of each class of service billed to subscribers. The reason for setting up the classification as I have set it up is because an analysis of costs shows that there is very little difference in certain classes of stations. For instance,

under the manual stations and under the sub-heading in common battery on Page 89, you will note the same costs are used for all kinds of stations with the exception of pay stations.

Station apparatus includes desk sets, wall sets, bell boxes, transmitters, receivers and induction coils, wire end protectors, such as fuses and protector blocks, batteries, cords, keys, extension brackets, switches and extra coin boxes.

Q. Well, there are some other items, aren't they, but they are shown at the bottom of Page 89?

A. That is right. I have classified generally the same classification for local battery and automatic stations as [fol. 2064] that shown under manual stations. I have used under automatic stations the same costs all the way through. After setting up these costs I discovered that we had a few automatic pay stations—how many I don't know, but some in Youngstown and possibly some other cities in the State—which would give a higher cost if properly classified under the automatic stations. However, I have thrown all stations—that is all pay stations and common battery or local battery stations together, making no allowance for dials from any of the automatic pay stations. This would mean that there has been an omission to the extent that we have automatic pay stations, for that portion of the equipment represented by that.

At the bottom, just above the item of "total" on page 89 I listed the transmitters, receivers and induction coils actually owned by the Ohio Bell Telephone Company and in use on independent type of instruments.

The number owned by the Ohio Bell Telephone Company is taken from our records for these items. These items of transmitters, receivers and induction coils are also probably low because of the fact that I have made no allowance for any transmitters, receivers and induction coils that may be and probably are owned by the Ohio Bell Telephone Company on vacant premises' stations; that is any instruments in vacant premises that were of the independent type and which would include the transmitters, receivers and induction coils owned by the Ohio Bell Telephone Company have not been included. Also I have excluded from this list the private line stations and long distance stations for the [fol. 2065] reason that private line stations are partly owned by the subscribers and in some of the cases owned by

the Ohio Bell Telephone Company. Not having the proper division as to ownership, I excluded all private line stations and have set up no cost for them. The same applies to long distance stations, as regards the matter of exclusion, because long distance stations are frequently terminations from private branch exchange switchboards. Not knowing the number that were terminated from the private branch exchange switchboards, I threw out the entire number of long distance stations on the assumption that they would all be included in private branch exchange stations.

This to some extent is also an omission.

Account Number 231, Station apparatus includes only material costs. The labor for installing station apparatus is included under Account 232, station installations, in accordance with the system of accounts prescribed by the Interstate Commerce Commission and adopted by the Public Utilities Commission of Ohio.

I have some inspections that were made some years ago relative to the different kinds and different amounts of apparatus associated with station apparatus; that is the different kinds and types of head sets, the different kinds and types of wall sets and the different kinds and types of bell boxes, and information relative to the associated items of buzzers, switches, extension arms and so forth, but inasmuch as that information was some years ago, and inasmuch as I had available from the actual records of installa- [fol. 2066] tions the different types and quantities and the amounts of money actually expended for construction costs for the station apparatus account for the year 1924, we analyzed those construction accounts and the amounts for that entire year.

In this analysis we considered 128,140 station installations. The amount of money represented in the actual cost to the Ohio Bell Telephone Company for these station apparatus figures was $1,343,561.00.

From this source of information, excluding abnormal amounts, of any particular item, such as abnormal amounts of dials or abnormal amounts of bell boxes, and only the proper average set-up for station apparatus, I set up my costs for material as shown on page 89 of Williams' Exhibit Number 7-B.

I also added to the material cost, the item of supply expense which is taken from the same source as that discussed

for the other accounts, being the actual cost to the company for the year 1924.

The total amount shown on page 89 for this is $5,589,862.00, which represents my best judgment of a conservative cost to reproduce as of June 30, 1925, the station apparatus owned by the Ohio Bell Telephone Company exclusive of all construction overhead costs.

Q. What is the fact with respect to the statement covering associated items at the bottom of page 89?

A. They are included and were included in our analysis of the actual items installed by the Ohio Bell Telephone Company for the year 1924.

[fol. 2067] The next item is that of station equipment shown on page 90. The quantities are set up allowing one installation for each item of station apparatus on page 89. I have found from a consideration and analysis of station installation costs that somewhere in the neighborhood of 80 per cent of all stations take approximately the same installation costs. There are some costs such as private branch exchange stations having a considerable amount of wiring. Others, such as pay stations, on which the installation costs run somewhat higher than the average, but having available also costs as of a recent date for the average cost of installation as experienced by the Ohio Bell Telephone Company. I took my costs from an analysis of the actual costs experienced by the Ohio Bell Telephone Company for the first eleven months of 1925, that cost, by the way, being somewhat lower than any other period of recent installation that I could find.

In this connection, we have the actual cost on 81,107 stations amounting to $387,782.00.

Plant supervision, tool and supply expense——

Q. Now, just a moment. Did you apply to your appraisal the results of your analysis?

A. I did, the actual cost as taken from that analysis.

Q. Proceed.

A. Plant supervision expense, tool expense and supply expense, are applied in the same manner as were discussed in the other accounts and obtained from the same source, that is, the actual construction cost of the Ohio Bell Telephone Company for the year 1924. The total amount ar-[fol. 2068] rived at is shown on page 90 as $2,164,835.00 which represents my best judgment as to the cost to repro-

duce new as of June 30, 1925, and exclusive of all construction overhead costs.

The next item is shown on page 91 is that of interior block wire. I have set these interior block wire- up by number of wires and quantities are obtained from the field inventories plus the net additions as taken from the records. These interior block wires, based on inspections made, show that about 55 per cent of all wires at the time the inspection was made were Number 17 twist wires. My judgment would be that owing to the very much larger use of 17 twist wire in recent years that the percentage would be much higher at the present time.

Q. That is the percentage of Number 17?

A. Yes, as against the total of different kinds of wire.

Q. Yes.

A. Our inspections showed, from almost 2000 inspections made at that time, that the average length of block wire was 62.518 feet.

Our unit cost both for labor and material are taken from actual construction experienced by the Ohio Bell Telephone Company for the first eleven months of the year 1925, those costs also being lower than any other recent period for actual construction costs, that volume of costs covering 962 installations and amounted to $4,929.00. The actual construction costs so obtained are the ones used on page 91.

Plant supervision, tool, supply expense is obtained and [fol. 2069] applied in the same manner as that discussed for other accounts.

That is obtained from the actual cost of construction as experienced by the Ohio Bell Telephone Company for the year 1924.

The amount shown on page 91 is $83,334.00, which amount represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all construction overhead costs.

The net item is that of private branch exchanges shown in detail of Pages 92 to 254 inclusive. The quantities for these private branch switchboards were obtained from the detailed field inventories brought up to June 30, 1925, by subsequent field checks. I have divided this account first into the multiple boards as shown on Pages 93 to 173 of Williams' Exhibit Number 7-B; the private automatic

switches shown on pages 174 to 208 inclusive, the order tables shown on pages 209 to 242 inclusive, the storage batteries and power plants shown on pages 243 to 254 inclusive.

On page 92 I set up first the——

Q. Just a moment, Mr. Williams, before you start on that I would like to ask you about the associated items referred to with respect to interior block wires on Page 91, consisting of block wire, material such as building construction, clamps, expansion bolts and messenger rings; are those items evaluated in the itemized cost applicable to the major items?

A. They are because the unit costs are taken from the costs actually experienced by the Ohio Bell Telephone [fol. 2070] Company, that is, the minor items, as well as the major items.

Q. Now, you may proceed with your discussion on the private branch exchanges?

A. On page 92, I have set up the non-multiple private branch exchange boards, setting up first the cordless boards and indicating for both the manual office areas and the machine switching areas the number of boards; and also the number of lines in each board, that is, the number of lines indicated are the total number of lines equipped. I set up these boards on the basis—that is of the auxiliary information—on the basis of the total number of lines equipped because that is the basis on which I arrived at my cost, pricing out typical boards of each kind and class and size and obtaining an average per equipped line cost.

Mr. McConnaughey: What do you mean by equipped there?

The Witness: We have in this private branch exchange switchboard cost the switchboard itself without the equipment in it, switches and relays and so forth are not always installed for all lines, so that as we add lines we put in that equipment. It is not put in until it is needed, but in order to obtain an average cost, I took the boards and took all of the equipment in them and then reduced them to an average per equipped line cost rather than a total, an average for total line cost.

In that way, you get a much better average because you take into consideration all the lines that are equipped and [fol. 2071] all of them that are not.

Mr. Postle: Mr. Williams, you said something a while

ago when you were testifying from Page 88 about installation of a buzzer system; do you refer to those exclusively owned by the Ohio Bell Telephone Company?

The Witness: I do, only.

Mr. Postle: There are some owned by private concerns are there not?

The Witness: There are many owned by private concerns, but they are not accounted for, listed or evaluated in this valuation.

The next classification is that of non-multiple cord basis boards. I have set this group of boards up under the sub-classification of the number of lines; that is set up under 30 line type, 80 line type, 320 line type and 1200 line type.

Under each of these types I have sub-divided the boards into manual office areas and machine switching areas, the boards in machine switching areas containing more equipment than those in manual areas.

Also I have set up the number of lines equipped for each type of board in addition to the number of boards themselves. The material cost prices are obtained from price lists and on the non-multiple type boards our labor costs were obtained from analysis of actual construction costs involving almost a million dollars—a little over $900,000.00 construction costs for non-multiple private branch exchange switchboards.

[fol. 2072] Q. Which costs do you refer to?

A. The actual costs experienced by the Ohio Bell Telephone Company, and it is my recollection on that that was for the year 1924 also.

The item of plant supervision, tool and supply expense is applied to these non-multiple boards in the same manner as that used for the other kinds and is obtained from the same sources of information, that is the actual costs to the Ohio Bell Telephone Company for the year 1924.

Now, coming to the——

Q. Have you discussed the material costs?

A. Yes, sir.

Q. Of the non-multiple boards?

A. I said that they were taken from the price list.

Q. Yes.

A. On the multiple boards, I have set them up in practically the same detail; and this applies also to the private automatic exchanges, as that set up for central office tele-

phone equipment. The sources of information relative to the quantities is the same as that discussed with the cordless boards.

We had in our files the full detailed information for all of these multiple boards, as well as the private automatic exchange boards.

Q. That is available for the Commission's engineers?

A. It is in pencil form and will be available for them to see or copy or anything that way that they want to. It is an immense volume of information, the same as it is on the central office equipment.

Q. Yes?

A. But it is available for whatever use they care to make [fol. 2073] of it.

The same installation labor, installation material, engineering or detail planning, freight and cartage and contingencies, as that used for central office telephone equipment has been used for private branch exchanges of the multiple type because the equipment is very similar to that for multiple central office telephone equipment.

The order table equipment as shown on pages 209 to 242 inclusive was obtained by actual field inventories and brought up to June 30, 1925 by subsequent checks, the same as the rest of the private branch exchange equipment.

The material costs were obtained from the same sources and the labor costs also, as that used for the non-multiple P.B.X.'s.

The last item under private branch exchange switchboards is that of storage batteries found on pages 243 to 254 inclusive.

The list of storage batteries and power plants is set up separately in this appraisal for the reason that these batteries, while associated with non-multiple private branch switches frequently feed battery supply to more than one board. Sometimes it is to one board, sometimes it is to two boards and sometimes it is to several boards; also the number of boards and the specific boards to which a given battery and power plant feeds supply may change from time to time.

That is, some subscribers have private branch exchange boards taken out and others come in, so that the power [fol. 2074] plants and battery supply, that is, the batteries

are not in my judgment to be properly associated with any particular non-multiple P.B.X.'s.

I have therefore, set them up separately and evaluated them on Pages 243 to 254 inclusive.

The quantities for these storage batteries and power plants are taken from field inventories and subsequent checks up to June 30, 1925. The material prices are taken from price lists and the labor costs taken from the same source as the non-multiple P.B.X.'s.

The plant supervision and the supply expense is loaded in the same manner as that obtained from the other accounts, and obtained from the actual costs of the company for the year 1924.

The total for the private branch exchange equipment as shown on Page 254 is $3,384,891.00 which represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of all overhead construction costs.

The next item in Williams' Exhibit Number 7-B is that of booths and special fittings as shown on Page 255. Booths and special fittings include the booths themselves, stools, lights, switches for controlling the lights, pay station signs and kindred items.

The quantities represented on Page 255 are taken from the detailed field inventories plus the net additions from the records up to June 30, 1925. I have analyzed these booths by compartments. Some booths are single booths and some booths contain more than one compartment. I [fol. 2075] felt that the compartment basis gave the best average cost for booths, because some booths are more expensive than others. Sometimes a subscriber will desire a booth or booths to conform to some special architectural design or finish in his building and up to a certain point, depending upon the amount of revenue to be derived, we will accommodate him; beyond on that point, we suggest that the subscriber build his own booths. In case he does, he of course pays for those and those are not included in that list on Page 255.

The unit costs for booths and special fittings are taken from the analysis of actual construction costs for this type of apparatus or equipment for the year 1923, and the first nine months of 1924.

The number of booths analyzed for the actual construction costs was 153, or rather the number of compartments;

the amount derived was $19,431.00; the actual costs so derived were used on page 255 to determine the value of this account; they were used to determine this value after loading with the plant supervision, tool and supply expense or in the same manner as that described on the other accounts, that is from the actual construction cost to the company for the year 1924.

The amount set up for booths and special fittings is shown on Page 255 as $167,201.00, representing my best judgment as to the cost to reproduce new for this class and kind of equipment as of June 30, 1925, exclusive of all construction overhead costs.

Q. That makes the total for station equipment of what?

[fol. 2076] A. As set up on Page 88 of Williams' Exhibit 7-B, $11,390,123.00, which is representative of my judgment of the cost to reproduce new this class of equipment as of June 30, 1925, exclusive of all construction overhead costs.

The item is that of office furniture and fixtures appearing on Pages 1 to 18 inclusive of Williams' Exhibit Number 7-C. I have discussed, I think in considerable detail the kind of equipment covered by office furniture and fixtures.

Q. Before you proceed with this account, I am reminded to ask you whether or not any of the privately owned booths referred to in one of your recent answers are included in your appraisal?

A. No.

Mr. Tolles: He said they were not.

The Witness: They are not.

Mr. Burr: I didn't know he did. I didn't hear him.

The Witness: Where did we get.

(Previous answer read.)

Which is discussion in connection with the inventory. The quantities shown on the pages referred to are obtained from detailed field inventories as of October 31, 1924, and the subsequent net additions from that date up until June 30, 1925, will be taken care of in a separate exhibit.

The prices under the heading of unit costs in each of the items in the office furniture and fixtures, represent only the material prices, there being no labor added, on the [fol. 2077] theory that this equipment could be bought locally to a very considerable extent and delivered on the job.

The total for this account is that shown on Page 18 being $576,083.00, and represent in my best judgment the cost to reproduce new as of June 30, 1925, exclusive of any construction overhead costs.

The next classification is that of——

Q. Just a moment, these costs which you say represent purchases are purchase prices current as of what time?

A. June 30, 1925.

Q. Proceed.

A. The next general division of the appraisal is that of tools——

Q. Wait a minute. On Page 18 you referred to certain associated items, are they or are they not included in the appraisal?

A. They are not included specifically in the appraisal; they are included only as a consideration in that having not been specifically priced out or valued the appraisal in my judgment necessarily represents conservative value owing to their exclusion or omission.

Q. Such items are present in the plant of the company?

A. Oh, yes.

Mr. McConnaughey: What is that item condulets?

The Witness: Condulet?

Mr. McConnaughey: On 18.

The Witness: 18. Why, it is my recollection that that is a kind of insulation provided for power wiring. I am a little bit hazy on that right now, but that is my recollection [fol. 2078] right now.

Mr. McConnaughey: It is a new one on me.

The Witness: We have condulets——

Mr. Hagenah: It is for all wiring, to carry the wiring for lights or also——

Mr. Tolles: Let Hagenah explain that.

Mr. Hagenah: It is a form of interior wiring that meets the approval of the fire underwriters; that meets with the fire approval without having to be put in iron pipe. That is a trade name.

The Witness: I thank you very much.

Q. Yes.

A. The next general division of the appraisal is that of tools, implements and store equipment, the summary for which is found on Page 19 and the detail for which is found on Pages 20 to 101 inclusive.

I think that I have discussed in considerable detail the various items going to make up all of the general accounts. The first subdivision of the general tool, implements and store equipment is that of the general store equipment found on pages 20 to 24 inclusive. The material quantities for this item are taken from detailed field inventories as of October 31, 1924, and the net additions subsequent to that date and up to June 30, 1925, will be shown on separate exhibits.

The costs set up for the item of general store equipment are for material costs only taken from price lists, on the theory similar to that of the office furniture and fixtures, [fol. 2079] that these items would be purchased delivered on the job.

Q. Price list current as of about what time?

A. June 30, 1925.

The total for the general store equipment is $17,555.00, as shown on Page 23, which represents my best judgment as to the cost to reproduce new as of June 30, 1925, exclusive of any construction overhead costs.

The miscellaneous items included at the bottom of that account are not included in any values set up in the account above and the only consideration given them is that the values that have been included are conservative on account of the exclusion or omission of these miscellaneous items.

The next account is that of tools and implements included on Page 25 to 101 inclusive.

Q. Tools and implements only?

A. General tools and implements, yes.

I have already discussed the store equipment.

Q. Yes.

A. The quantities are obtained as in the other general equipment accounts, from the detailed field inventory as of October 31, 1924, and the costs include only material costs as of June 30, 1925, the theory being that these items to a very considerable extent would be purchased delivered on the job.

The total for the item of general tools and implements is that shown on page 101 being $384,364.00, being the cost to reproduce new as of June 30, 1925, for that part of the appraisal covered by the inventory, and exclusive of any construction overhead costs.

[fol. 2080] The same consideration applies to the general store equipment and the office furniture and fixtures, in that the amount contained here in the appraisal, Williams' Exhibit C as of June 30, 1925, is only that proportion covered by the inventory, the balance as I stated being covered by this exhibit.

Commissioner Poor: We will save the next question until after recess.

And thereupon a recess was taken until 1:30 o'clock P. M. of same day.

[fol. 2081] Wednesday Afternoon Session,

January 13, 1926.

And thereupon the further hearing of this case was resumed pursuant to recess.

Present:

Hon. Charles C. Marshall, Chairman, and Hon. F. Maullar, Public Utilities Commissioners.

Messrs. Karl E. Burr, S. H. Tolles, C. S. Maltby, on behalf of the Ohio Bell Telephone Company.

Messrs. W. S. McConnaughey and Fred W. Postle, Special Counsel, on behalf of the State of Ohio.

Mr. C. A. Leach, Director of Law, on behalf of the City of Columbus, Ohio.

[fol. 2082] And also GEORGE B. WILLIAMS, resuming the stand, for further direct examination, continued his testimony as follows:

Examined by Mr. Burr.

Q. Mr. Williams, the next item in your appraisal I believe is that of stable and garage equipment, is it not?

A. That is true.

Q. Discuss the item if you please first stating where the appraisal of the articles comprising that item is to be found?

A. The stable and garage equipment appears on pages 102 to 109 of Williams' Exhibit Number 7-B. This account lifts and covers the automobiles and garage equipment, the tools and machinery in shops and garages for keeping stable

and garage equipment in repair and the costs covering this equipment comprising only the material costs, no labor costs having been added because we felt that this equipment would be purchased delivered on the job. Material costs are taken from current price lists as of June 30, 1925.

The associated items at the bottom of Page 108 and the top of Page 109 are not listed or valued in any of the items preceding in this account and the only consideration that has been given to these items is that if we had been able to determine the proper numbers and the proper costs for these associated items, the value listed on 108 would have been increased and the result as it stands naturally is that [fol. 2083] there are certain omissions and the amount is conservative to that extent.

The total cost shown on page 108 for this item is $570,998.00, and represents my best judgment of the cost to reproduce new as of June 30, 1925. For that portion of the stable and garage equipment inventoried as of October 31, 1924.

The quantities are obtained from the detailed field inventories as of the latter mentioned date and the additions between that date and June 30, 1925 will be taken care of in a separate exhibit.

Q. That includes your appraisal of the items of physical plant does it not?

A. With the exception of miscellaneous construction expenditures on Page 126.

Q. Yes.

A. And also the net additions that I spoke of.

Q. Yes. I direct your attention next to the item of miscellaneous construction expenditures shown on Page 126 of Exhibit 7-C and ask you to discuss that item?

A. This item covers the loud speaker and radio broadcasting equipment of the Ohio Bell Telephone Company which equipment consists of the speech input equipment moved to subscribers' premises for the purpose of reception of anything that the subscriber desires to transmit over radio and broadcast, and the balance of the equipment consists principally of loud speaker equipment.

Mr. McConnaughey: We object to that. That has not any telephone use that I can see.

[fol. 2084] The Witness: May I state my reasons for putting it in and then let your objection go in?

Mr. McConnaughey: Yes.

The Witness: I had included it in here for the reason that radio transmission and telephone transmission are related in a way, also because the development of radio is somewhat problematical at the present time and it may be that the telephone companies may participate in the future to a considerable extent in radio transmission.

Also, because the company derives a certain amount of revenue from the use of this equipment and the use of long distance lines in connection with this equipment, which revenue is included in the statement of revenues and expenses that will be submitted in connection with this case.

I will state the amount and then you can put in your objection.

Mr. McConnaughey: Are you through?

The Witness: I was just going to state the amount, but that is all. The amount is $12,805.00, and is obtained from the records of actual costs of the company as of June 30, 1925 and represents my judgment as to the cost to reproduce as of that date.

Mr. McConnaughey: We object to it.

Mr. Burr: There is a $12,000.00 objection.

Commissioner Poor: The objection will be sustained.

Mr. Burr: Note the exception.

Mr. Tolles: Well, should the revenues from that source go out also?

[fol. 2085] Mr. McConnaughey: I should think so.

Commissioner Maullar: Yes.

Mr. McConnaughey: Yes.

Mr. Tolles: We have included the revenues from this apparatus in our revenues; should that go out also, the revenue statement?

Commissioner Poor: We will rule on that when we come to it.

Q. Have you prepared an exhibit showing the net additions to the general equipment of the company from November 1st, 1924 to June 30, 1925?

A. I have.

Mr. Burr: It may be marked for identification Williams' Exhibit Number 8.

And thereupon the paper writing so last above referred to is for the purposes of identification marked Williams' Exhibit Number 8.

Q. Those net additions apply to general equipment only, do they not?

A. They do, and the reason for making this exhibit is because as I stated in my testimony relative to the general equipment contained in Williams' Exhibit 7-C, the values therein contained are as October 31, 1924, and are not brought up to any later date in Exhibit 7-C for the reason that we do not keep any record of measurements or quantities on the general equipment accounts and the only way to bring the values or the costs for these general equipment accounts up to June 30, 1925, was by the use of the [fol. 2086] actual money value net additions as taken from the records of the company. I have secured these net additions from the records of the company and they are as stated on Williams' Exhibit Number 8, being in total of $167,806.97.

Q. Which represents what?

A. My -justment of the cost to reproduce that property as of June 30, 1925.

Mr. Burr: At this point Mr. Williams may stand aside and Mr. Morrill may take the stand.

[fol. 2087] And also E. F. Morrill, called on behalf of the Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Please state your name.

A. E. F. Morrill.

Q. Where do you live?

A. Cleveland, Ohio.

Q. And what is your occupation?

A. I am building engineer for the Ohio Bell Telephone Company.

Q. How long have you occupied that position?

A. About three years.

Q. Prior to three years ago, were you engaged in the telephone business also?

A. Yes, sir.

Q. How long have you been engaged in that business?

A. About 27½ years, ever since my graduation from college in 1898.

Q. From what college or institution of learning did you graduate?

A. The Massachusetts Institute of Technology, at Boston, Department of Electrical Engineering.

Q. After your graduation what was your first employment in the telephone business?

A. After graduation I was employed by the New York and New Jersey Telephone Company at Brooklyn, New York, in the engineering department. My duties consisted of inspections of materials, such as line wires, underground cable, aerial cable, submarine cable. I made factory inspections and tests for acceptance; and writing specifications for central office equipment, substations and private branch exchanges.

[fol. 2088] Q. After leaving the employ of the New York and New Jersey Telephone Company, what did you do?

A. In 1904 I was transferred to the Central Union Telephone Company at Springfield, Illinois as equipment foreman in charge of the installa-ion of central office equipment and substation equipment in connection with cutovers from magneto to common battery systems; I also wrote specifications for central office equipment and made up the plans, and dealt with the contractors on building on arrangements in connection with these central office additions and installations. I occupied——

Q. How long did that work continue, about?

A. Well, I was in that position until 1914 when I was made building and equipment engineer for the Illinois Division of the Central Union Telephone Company.

Q. And how long did you hold that position?

A. I held that position until 1916 when I was transferred to the Ohio Division of the Central Union Telephone Company in the same capacity.

Q. And what is your present position?

A. Building engineer.

Q. Since 1916, what in general have been your duties?

A. As building equipment engineer, in the Ohio Division, I had charge of the writing of specifications for central office equipment. I also had charge of the building work, taking bids and letting contracts for and supervision of the building construction. This was until 1921 when the Ohio

Bell Company took over the Ohio Division of the Central Union Company, and the engineering departments were consolidated in Cleveland. I was then made equipment engineer in charge of manual equipment.

[fol. 2089] Q. During the time that you were building and equipment engineer, for the Ohio Division of the Central Union Telephone Company, what buildings were built for your company under your supervision?

A. If I may, I would like to refer to some notes on that, Mr. Burr?

Q. Yes, I assume counsel have no objection to your doing that.

A. There was the Akron Main Building which is a building about approximately 100 feet frontage and 115 feet deep. That was a three story building, fireproof construction.

The Dayton-Lincoln Building with a frontage of 40 feet and a depth of about 98 feet; that was a two story building of fireproof construction.

The Toledo-Broadway Building with a frontage of 44 feet and a depth of 85 feet; two story and basement, fireproof building.

The Toledo-Pontiac 26 by 65 feet two story and basement non-fireproof building.

The Findlay Building 45 feet by 93, the greater portion of that is fireproof, the equipment portion, and the front part is not fireproof.

The Sandusky Building, 36 by 93 of same construction as the Findlay Building.

The Columbus-Garfield Building, 40 by 75; that is a three story and basement building, fireproof.

The Piqua Building, 40 by 70, two story and partial basement and fireproof construction.

Then there were some major additions to the Columbus-Franklin and Dayton-East: the Youngstown-Garfield; some [fol. 2090] remodeling and rearrangements and lesser additions to Painesville, London, Columbus-Main, Toledo-Adams, Canton-Hemlock, Dayton-Main, Springfield-Main, Miamisburg and Franklin.

Q. I think you have said that you were building and equipment engineer for the Ohio Division of the Central Union Company until 1921. In 1921 I think you said that you were made equipment engineer for the Ohio Bell Com-

pany in charge of manual central office equipment did you not?

A. That is correct.

Q. How long have you held that position?

A. I held that position until February, 1923 and at that time I was appointed building engineer.

Q. What sort of a building program if you know was inaugurated by the Ohio Bell Company at about the time of your appointment as the building engineer?

A. Well, at that time the Telephone Company was entering on an extensive building program.

Q. In any particular part of the state?

A. Well, it is mostly around Cleveland so far, although we are branching out in other parts of the state.

Q. In such places at Toledo?

A. Toledo, yes, sir.

Q. Canton?

A. Canton.

Q. And generally throughout the system?

A. Yes, generally throughout the system.

Q. Of what do your duties consist?

A. As building engineer?

Q. That is your duties as building engineer, of course——

A. As building engineer I collaborate with the architects in the preparation of plans and specifications for these [fol. 2091] buildings; I take the bids and let the contracts for the buildings; I check the contractors' bills for the work done in accordance with the specification and for the extra work that is ordered after the contract is let.

Q. Have you done those things with respect to any actual buildings constructed for the Ohio Bell Company.

A. Yes, sir.

Q. Name one or two instances, if you please.

A. Why, I did that in connection with the Canton Building.

Q. Yes.

A. And with the additions to the Columbus-University, Columbus-Adams, the Columbus-Randolph Buildings and the Akron-Main Building, Toledo-Collinwood, Toledo-Forest, Toledo-Pontiac, Cleveland-Fairmont, Cleveland-Thornton, and Cleveland-Brooklyn Building that is now under construction, the Cleveland-Kenmore Building which is now in the architectural office, the Cleveland-Morning Side Build-

ing which we have just requested bids on, the Cleveland-Main and Toledo-Main Buildings.

Q. Did you have to do with the remodeling of any other buildings?

A. Yes, sir.

Q. During that period?

A. I remodeled the Columbus-Commercial Building and the Akron—what we call the State Building, the one we acquired from the Ohio State Company, and the present Toledo-Main Building and the Springfield-Center Building.

Q. Have you, as a part of the forces in your office, under your control an architect?

A. I have an architect, yes, sir.

Q. What are his duties in brief?

A. Well, his duties are to design in details, some of these [fol. 2092] buildings and some of these changes in remodeling.

Q. In connection with your engineering experience with respect to telephone business, what will you say as to the characteristics of telephone buildings as compared with the ordinary commercial type of building to be met with in the business section of any of the commercial cities of Ohio?

A. Well, we have in our telephone buildings a number of special features that are provided particularly for the telephone equipment and which naturally would not be met with in an ordinary commercial type of building.

Q. Describe some of them, if you please.

A. I have here a memorandum that I prepared some years ago for use in checking over architects' plans in order to be sure that we have got in these particular features that you have just mentioned. I have here the item of cable holes. Now, these cable holes are provided in the floors to accommodate the cables passing from the frames and racks on one floor to the switchboards and other equipment on another floor. The equipment engineers, when they lay down their floor plan of equipment, show generally in one corner of the room, what we call a locating point, and all the dimensions for the location of equipment is in reference to this locating point. The locating point on one floor is generally directly above the locating point on the other. From these equipment plans we calculate the location of all the cable holes and slots required for the telephone equipment,

and on the architects' plans we also show these locating points and dimensions, these holes to these locating points. [fol. 2093] Then when the building is being constructed we place in the floor slab a marker. It is generally a little brass rod that occupies the position of this locating point, and in actually installing the cable holes, we measure from those locating points. Now, this is done—and it has to be done accurately—because the manufacturer of equipment figures the length of his cable rings and cables and cuts his cables from these dimensions shown on the equipment plan and the architect's plans, and if the cable holes are not located accurately, it would mean considerable expense to either modify the manufactured equipment or to relocate the cable holes.

In addition to the cable holes, we have under our main frame, either a slot or a series of sleeves or holes left in the floor through which the underground cables come from the cable vault to the frames, to the main frames. The location of these sleeves or slot, is also in reference to those locating points, and they must be located accurately because they tie in through cable racks from the main frame to the intermediate distributing frame with the other cable holes, and the same thing applies to changing cable rings and cable, if they are not located accurately.

In our cable vaults we provide pulling-in irons and pulling in doors to facilitate the pulling in of the underground cable. From our cable vaults we have vents to the roof and fresh air ducts coming in from the outside, generally at about the grade line. We also provide underneath the floor what is called a coke ground. This consists of a copper plate imbedded in coke with a stranded wire extending to some bus bars mounted on top [fol. 2094] of an iron pipe which also goes through the floor to hold it rigidly in place. And for these gas engines we provide foundations. They extend generally about three feet under the floor and are surrounded with a sand cushion to prevent the vibration of the engine being transmitted to the building.

In connection with this engine we provide an exhaust pipe to the roof, either in a chased or one of the outside walls or on the outside of the building itself. This gas engine takes gas service and water service and a drain for the cooling water. We also provide gasoline tanks which are located

outside the building, if possible, below the level of the basement floor, and have pipes running to the engine. This is done in order to provide fuel for the engine in case of failure of the gas supply.

Q. Well, what is the purpose of the gas engine?

A. The gas engine is used to charge our batteries in emergencies when the electric power is off.

Q. What about light and fan outlets?

A. Well, our lights and fan outlets occupy a certain relation to our switchboards, and it is necessary to show the actual dimensions we want for those on our architect's plans, and to see that they are installed in accordance with those dimensions.

Q. Yes.

A. We also have what we call inserts put in the ceiling for supporting the cable racks. They consist of little nuts drilled for 5/8 inch bolt with a suitable container for holding them firmly in the concrete.

Q. I think those are enough.

A. Well, we have another, quite an extensive emergency lighting system, Mr. Burr.

[fol. 2095] Q. Very well, describe that.

A. It consists—it is used in these machine switching offices, and consists of a separate lighting system from the commercial lighting system. These lights are located around the offices at suitable points and there is a relay on the connections so that if the commercial power goes off these special lights are connected to our 48 volt system. This gives the maintenance people a chance to get from any part of the switch rooms to their power equipment so as to disconnect the power driving machinery and start their gas engines and charge the batteries to prevent them running down while the commercial power is off.

In our manual offices we have similar to that, only it is gas lighting instead of 48 volt lighting.

Q. I think that those instances are sufficient for present purposes and I will ask you whether or not they add to the cost of your buildings when first erected?

A. Yes, they do. They add not only the cost of the bare material entering into these items, but the installation of these items reflect on other trades, for instance the laying of steel. If our floors did not have these cable holes and vaults and so forth, the laying of the steel would be con-

siderably simplified. There would be less in number and different lengths of steel to be handled and the steel men would not have to be so careful in laying the steel not to disturb these other items. It also reflects itself on the pouring of the concrete. That is a contractor may have his steel all layed and ready to pour his concrete; he has to stop and check up the location of these cable holes and hangers and things of that sort and correct any of them that have been knocked out of place. Our inspector follows him up [fol. 2096] pretty closely on that, sees that he does it. Well, by the time he has done that maybe it is too late to start pouring his concrete that day; that has to go over to the next day, and if that is a bad day he will get still further delay on it.

Q. Are there further distinctive features in the construction of the telephone buildings of your company as compared with other commercial buildings, involving additional costs?

A. Well our floors are designed to carry a live load of 160 to 170 pounds per square foot.

Q. As compared with what for the ordinary commercial building?

A. Oh, that would be from 80 to 100 pounds more than the ordinary commercial office building, for instance; then where we have concentrated loads, such as occur with our main frame and our power charging sets, it is necessary to put in a little special reinforcing to carry this load, above the 175 pounds that I mentioned.

Q. What will you say as to the flexibility for which these floors in the building must be designed; I mean to say the flexibility in location of equipment?

A. Yes; our equipment is of such a nature that when it is all installed it covers practically all the floor.

Q. Yes.

A. What I mean is that there are no vacant spaces unoccupied by equipment. Now, that means we have got to make our buildings flexible in that respect, and for this reason we do not take any reductions in figuring our girders and columns.

Q. Are those deductions allowed for in the ordinary commercial type of building?

A. Well, in the ordinary building in designing of girder, [fol. 2097] say the building is being designed for a 75 pound

live load, in designing a girder to carry that floor, they design it to carry the full dead load; by that I mean the weight of the material entering into the floor construction, plus a certain percentage. I think it generally runs about 85 per cent. of the live load that the floor is designed to carry, and in that same way in designing the columns, they take a reduction. In designing the type floor, we will carry the full dead load that is to be imposed upon it plus 95 per cent. of the live load.

Q. You speak of reductions; those are reductions allowed by whom or by what?

A. Well, those are generally specified in the building codes for the different cities.

Q. How do these elements affect the cost of your buildings?

A. Well, they increase the cost over what it would be if we took these reductions.

Q. What increase in cost, if any, is there due to the designing of your buildings for additional stories, and by that I mean stories which are to be added after the original construction of the building?

A. Well, now, our regular practice is to design our buildings to take care of additional stories, which will be required for possible future equipment.

Q. Yes.

A. Or for actual future equipment.

Q. What bearing has that on the cost?

A. Well, that increases the cost of the columns and the footings and the outside wall, if it is a bearing-wall building, over what they would cost if those additional stories [fol. 2098] were not to be provided for.

Q. What is the usual period of additional growth which you try to allow for in your building construction plans?

A. Well, we have found that an eight year, about an eight year period is the most economical building period; that is it is cheaper to build for that period and then make an addition than it would be to pay the carrying charges and the operating charges on the ultimate building which we generally plan for a 20 year period.

Q. Are there any other factors which add to the cost of telephone buildings of your company as compared with the ordinary type of building of the same capacity; and if so will you discuss them, but briefly?

A. In our buildings the company has a big investment for central office equipment. For this reason and to safeguard the employees, we are pretty rigid in our requirements for fire protection. By that I mean in protecting the exits with fireproof walls and putting fireproof doors to the exits. Our windows are steel windows with wire glass and where the adjacent property is quite a hazard, we put on automatic steel rolling shutters or tin clad rollers, where it is less. Our operator rooms and cable vaults, gas engine rooms and boiler rooms all have 8 inch brick walls with steel automatic closing doors. Those items are more rigid than you will find in the ordinary building comparable with our buildings in size in the average town.

Q. And what effect, if any do they have on the rest of your building?

A. They add to the cost of the building.

[fol. 2099] Q. To what extent do these features which you have described appear in the various buildings of your company?

A. Well, all of them appear in some and of course in the smaller non-fireproof buildings we would not have some of these features that I have mentioned.

Q. What have you to say with respect to the height of ceilings in your buildings as compared with those of the ordinary commercial building?

A. Well, the height of our ceilings is greater than in the ordinary building. Our terminal rooms should have a ceiling height of 15 feet; the operating rooms have 13 feet.

Q. How does that compare with other buidlings?

A. Well, an ordinary office building generally has about 10—9 or 10 feet ceiling.

Q. Is that also true of commercial buildings?

A. Well, outside of stores; stores they generally make 15 or 16 feet.

Q. What have you to say on the subject of so-called suspended ceilings, that is to say ceilings for rooms where there are very few partitions and very few supports; is that one of the factors which enters into the cost of your building?

A. No, I don't think it does, Mr. Burr.

Q. Do you know Mr. E. L. Myers who testified in this case on December 22nd, relative to the reproduction cost new of the buildings owned by the company?

A. Yes, sir, Mr. Myers was employed by the company as building overseer to appraise all the buildings owned by the company in the State of Ohio, and this work was done under my supervision.

[fol. 2100] Q. Have you reviewed Mr. Myers' costs which he gave in his appraisal of the buildings of the company?

A. Yes, sir.

Q. Are you familiar with the plans pursued by him in evaluating those costs?

A. Yes, I am. I furnished Mr. Myers with the plans and specifications from the company's files. I visited with Mr. Myers practically all the buildings and from these plans and specifications Mr. Myers drew off the quantities of material; on certain buildings for which we had no plans and specifications, dimensions were taken and information gathered at the time of these visits which enabled Mr. Myers to make up specifications of his own and from these dimensions and information Mr. Myers drew up the quantities in those buildings. To these quantities he applied unit costs for labor and material. On account of his experience in building construction and as a contractor, we required him to gather all the data necessary to determine what unit costs were to be used in the various localities in which we had buildings.

Q. Did you collaborate or work with him in the preparation of the fundamental data necessary to appraise the buildings?

A. Well, outside of the getting information on the unit costs and on some of those I checked them against my knowledge of similar costs on recent buildings constructed for us, I checked from the plans and specifications a great number of the quantities that Mr. Myers had determined; that is I made an independent calculation of my own to check against his quantities.

[fol. 2101] Q. Did you then make any study of building costs independently of Mr. Myers?

A. Yes. I went through the records and——

Q. What records?

A. The company's records of costs that we had gotten on a number of buildings recently constructed. I think there was 7 buildings.

Q. By the way, before you go any further with that, let me ask you whether you attempted to change any of Mr. Myers' units for labor or material?

A. Oh, no, no. We wanted that to be Mr. Myers' own personal opinion on the cost of those buildings.

Q. All right now, you may proceed with the comparison on those that you made.

A. These seven buildings showed a total cost of $584,000.00 or an average cost per cubic foot, actual cost of 46.8 cents.

Q. About what time had these buildings been constructed?

A. Well, there were three completed in November, 1924 and the balance were in 1925.

Q. Now, proceed with your comparison.

A. From Mr. Myers' appraisal I picked out 37 buildings of the same kind that I had obtained actual cost on; that is they were wall-bearing buildings with some amount of steel beams and fireproof floors and practically reinforced concrete buildings. Mr. Myers, in those 37 buildings found a cost of practically $4,000,000 or an average reproduction cost new of 46.1 cents as compared with 46.8 cents on these 7 recent buildings, actual cost.

Q. As of what date do the actual costs referred to in [fol. 2102] your testimony reflect the cost of that type of building?

A. Well, I think this 46.8 cents in my opinion will represent a fair cost as of June 30, 1925, with this exception, some of these buildings are additions and naturally there will be one or more walls in this cost—or rather they are not in this cost.

Q. Yes.

A. Which would be provided if it were a new building of that size; that is where we joined on to the old building the wall is missing.

Q. Yes.

A. In some of them—one of them in particular—there was no plumbing provided because those facilities were in the original building. In one of them there was no boiler provided because the boiler in the other building was of sufficient capacity to carry this addition; and also on two of these jobs the contractors lost money. Now, for those reasons I believe that these costs are low as compared with those buildings, if they had been complete buildings, and the contractors had received the profits that they are supposed to receive in building work.

Mr. Postle: Mr. Burr, those 5 or 7 buildings upon which the cost was actually taken?

The Witness: No, 7 buildings.

Mr. Postle: Where are they located?

The Witness: What is that?

Q. Can you located those 7 buildings?

A. Yes, sir.

Q. For Mr. Postle, please.

A. Yes, there was the Cleveland-Fairmont Building, the addition to the Cleveland-Fairmont rather, the addition to the Toledo-Forest, Toledo-Collinwood, Columbus-University, Columbus-Randolph, Akron-Main and the new Can- [fol. 2103] ton Building.

Q. Did you make comparison of the actual costs of any other class of the telephone company's buildings with the appraised value of like buildings made by Mr. Myers?

A. On Mr. Myers' appraisal there were 5 buildings of what might be called the steel frame type, and Mr. Myers obtained a reproduction cost new on these 5 buildings of 2,800,000 odd dollars, and we have not constructed any buildings of this type recently.

Q. What was the cubic feet cost of those buildings if you worked it out?

A. Yes, his cost was 60 cents a cubic foot.

Q. Now, proceed with your comparison.

A. As I say, We have not built any buildings of this type recently, but in 1921 we completed one the actual cost of which was 75 cents a cubic foot.

Q. Now, you say you compared only one of what kind?

A. Of these steel frame buildings.

Q. Proceed.

A. To bring that down to date in order to compare it with Mr. Myers figure of 60 cents, I applied to this 75 cents an index which is based on the change in price for different dates.

Q. Change in price between what dates?

A. Well, between the dates when this one was built.

Q. And what?

A. And June 30, 1925 and got an equited value of 64½ cents as compared with Mr. Myers' 60 cents.

Mr. McConnaughey: What building was that, may I ask?

Q. Oh, yes, I meant to ask that.

[fol. 2104] Mr. McConnaughey: Yes.

The Witness: The building that I used, that was the Cleveland-Cliffside Building.

Mr. Postle: 64½?

The Witness: 64½.

Q. In the costs which you have used, in evaluating the buildings used in your comparisons have you included any amount for tearing down old buildings which may have been on the premises when a new building was built?

A. No, sir.

Q. Or for any work done in any such old building?

A. No. Now, those buildings that I spoke of before as additions do not include any cost for tearing down old wall where we joined onto the original wall, and it does not include any cost for work done in the old building in connection with this addition.

Q. Do the costs include anything for repairs or maintenance?

A. No, sir.

Q. In connection with the costs which you found and which you have used in your comparisons, what, if anything did you allow for architect's fees?

A. I allowed the actual architect's fees on those.

Q. The actual architect's fees paid by whom?

A. Paid by the company to the architects.

Q. How did they compare with the fees computed by Mr. Myers for the same buildings if you know?

A. Well, I cannot make that comparison because some of these are additions. Although Mr. Myers used the usual figure of 6 per cent. for architect's fees. Now, that 6 per cent. does not include any of the architect's traveling ex- [fol. 2105] penses to inspect materials at the factories; it does not include anything for any extra work that is done on the plan after they are sent out for bids. It does not include any extra blueprints that we happen to order from him in addition to those used by the bidders.

Now, on those jobs that I have used we have required these extra services from the architect so that on these buildings they run—oh, from 7 to 10 per cent.; probably it would average somewheres around—oh, 7 per cent.—maybe a little higher than that.

Mr. Postle: Does that include those extras that you have spoken about?

The Witness: Yes, my figures include those extras because I have the actual amounts paid to the architects, which of course included his traveling expenses and these extra items that we requested him to do.

Q. How do you regard 6 per cent. as the charge for architect's fees?

A. Well, just you mean what is my opinion?

Q. Yes.

A. Of whether that is satisfactory to pay an architect?

Q. Whether that is a reasonable charge?

A. Oh, yes, in my opinion it is. What I mean by that outside of these items that I have mentioned, his traveling expenses and things of that kind; couldn't expect an architect to travel all over the country for that 6 per cent.

Q. In the cost as of June 30th used by you, in connection with your previous testimony, has any telephone company expense been included?

A. I have not included anything for the telephone com- [fol. 2106] pany's engineering, general expense, interest or taxes during construction.

Mr. McConnaughey: Mr. Burr——

Mr. Burr: Yes.

Mr. McConnaughey: May we ask him to give us the cost of each of these 7 buildings that he has given us the total of?

The Witness: Surely.

Mr. Burr: He may be able to do it right now.

The Witness: Yes, I have those right here in my notes. Let's see, those were the 7 I used for getting the 46.8 cents, Mr. McConnaughey?

Mr. McConnaughey: Yes.

The Witness: The Cleveland-Fairmont addition $62,-364.00. The——

Mr. Postle: Where is that located? We have some descriptions here but we cannot hardly put the valuations from the descriptions.

The Witness: Now, that would be your building No. 11, Cleveland-Fairmont, the Cleveland Building, No. 11.

Q. The buildings that you are now referring to are in the 212 account?

A. Yes.

Mr. Burr: These are the 212 account. I am asking that for Mr. Postle's benefit.

The Witness: Yes—where are those inventories?

Mr. Schneider: Better read it off.

Mr. Hagener: We had one. Go ahead and give it.

The Witness: Toledo-Forest——

Mr. Postle: Is that Forest or Franklin?

[fol. 2107] The Witness: Forest, $31,418.00. Toledo-Collinwood, $42,172.00. Columbus-University, $36,544.00. Columbus—now, Columbus-University,—you may find that in your record as Columbus-North. That is we changed the name recently and it may have been in there as North; I don't know.

Mr. Postle: We will find that out.

Mr. McConnaughey: Have you the date of construction there, too?

The Witness: Surely.

Mr. McConnaughey: Give us that, too.

The Witness: Do you want to go back and get that?

Mr. McConnaughey: Yes.

The Witness: Cleveland-Fairmont, completed June, 1925; Toledo-Forest, completed November, 1924; Toledo-Collinwood, completed December, 1925.

Let's see, I have got as far now as where I have given you the values haven't I, Mr. Hagener? Columbus-University completed November 1924, $36,544.00. Columbus-Randolph, which may also be in my recollection as Hilltop—I think it is.

Mr. Postle: It is.

The Witness: November, 1924, $29,916.00.

The Akron-Main completed March, 1925, $88,221.00. Canton-Main, completed June 1925, $293,789.00. Now, those up to Canton are all additions; they are not complete buildings.

Mr. Postle: You mean the Randolph exchange in Colum-

[fol. 2108] bus was completed as of November 1924?

The Witness: No, I mean the addition to its was completed.

Mr. Postle: Oh.

The Witness: These up to Canton, they are not complete buildings that I have mentioned, but simply the additions that we have made in these years that I gave.

Mr. Postle: I see.

The Witness: The Canton-Main is a complete building.

Q. Now, you say that the costs which you used included nothing for the telephone company's overhead expenses?

A. That is correct.

Q. Did you make comparison with Mr. Myers' figures on the same basis?

A. Well, his figures do not include any telephone company's overhead.

Q. Your comparisons were made on the same basis?

A. Yes, sir.

Q. What would be necessary to add to those costs of the buildings in order to arrive at their costs to the telephone company?

A. Well, it would be necessary to add these overheads for engineering and general expenses, interest and taxes during construction.

Q. To what extent are those costs incurred, if you know?

A. You mean how are they incurred?

Q. Are they actually incurred if you know?

A. Oh, yes, indeed.

Q. Let's see, how long did you say you had been with the telephone company?

[fol. 2109] A. I have been in the telephone business 27½ years.

Q. Is any of that cost incurred in your department and has it been through your office?

A. Yes, sir, the engineering expense has been in my department.

Q. Are there certain items which are added and which have been added to these buildings which you have considered which you included in the specifications which you have not taken into consideration in your previous testimony, but which do represent items of value connected with those buildings? You can answer that question by yes or no.

A. Yes, sir.

Q. Well, what are they, if you please?

A. Well, there is the item of fences, driveways and lawns, shrubbery, the final grading of the lots, the tearing down of old buildings; the switchboard platforms are not included in some of them; some of them don't include the gas engine foundations. There is quite a number of those smaller items.

Q. What about sidewalks?

A. Well, sidewalks.

Q. Screens?

A. No, they do not include screens.

Q. Gas service and meters?

A. Do not include the gas service or the water service or the electric light service. Some of the buildings have sewers that run—that is, we had to extend the sewers through the streets to some other point. Those are not included.

In checking over Mr. Myers' details I found quite a number of those omissions and I can give them to you and the buildings in which I noted them, if you wish, Mr. Burr.

Q. Give a few. It will not be necessary I imagine to go [fol. 2110] through all of them but we would like to have a few typical instances, if you please.

A. Yes. Now, this switchboard platform that I mentioned not included in the Akron-Main, Zanesville and Toledo buildings, that is Toledo-Collinwood, the Forest and some of the Columbus buildings.

The gas engine foundations were omitted on the Columbus-East—that is Franklin—the Akron-Main; the Columbus-Main.

The fences were not in the Canton-Hemlock, the Cleveland-Garfield appraisal. The sidewalks in the Cleveland, Martins Ferry, Painesville; only the site in Massillon, Toledo-Collinwood, Sandusky. We actually tore down old buildings on those particular sites. We also paid considerable for the electric service on the Columbus-Garfield and Youngstown buildings. He did not get that in the appraisal. The water service to Glenville. At Zanesville, Akron, here on this Columbus-Main building, we extended the sewers in the alleys or in the streets to quite a distance in order to get proper drain for our buildings, to get the proper pitch to drain our basements.

Ash hoists omitted in the Akron-Main, Columbus-North.

The Gas Company required us to put in a receiver on our gas line in quite a number of points in order not to interfere with the pressure, due to the operation of our gas engines. These are big 10 inch pipes about 20 feet long. He skipped those on the Youngstown-Garfield, the Dayton-Lincoln, Toledo-Forest jobs.

At the Youngstown-Garfield the deep well with pump and [fol. 2111] motors is omitted.

The fire shutters were omitted on Painesville.

The cost of shoring adjacent buildings was omitted in Cleveland-Garfield, Glenville, Canton-Main. The cost of piling was omitted on the Toledo-Collinwood.

Mr. Postle: May I ask a question?

Mr. Burr: Yes.

Mr. Postle: When you speak of sidewalks, do you mean those outside of your property line?

The Witness: Those on the property.

Mr. Postle: Or connected?

The Witness: Although the others are not included either. No sidewalks.

Now, there was nothing in there for the rental of property to be used by the contractor for the storage of materials. A lot of our buildings at the present date over the entire lot, and I know on the one building now in Cleveland we have rented quite a bit of adjacent property for the use of the contractor; in fact two in Cleveland we have done that.

Q. That is not included in the contract price?

A. No.

Q. Go ahead.

A. No, that is entirely separate from the contract.

There is nothing in Mr. Myers' figures, no allowance for temporary heat and temporary light during the construction of the building. We have paid for that in connection with the Canton-Main building as one instance and on two buildings we are now building we have to pay for the tem-[fol. 2112] porary heat.

Q. When you made your comparison with Mr. Myers' costs, did you or did you not also exclude these costs that you have been describing?

A. Yes, I excluded the major items. Now, I think in two of those items I used for comparison the cost of the gas engine foundations were in there, too; in the building that Mr. Myers used there were also some gas engine foundations, but most of those items, the big items, are deducted for that.

Q. As an example of an omission with which we can perhaps close this subject, let me ask you whether it was not necessary to build in connection with the original central office main building here in Columbus on Third Street, a large private sewer?

A. Yes, I think I mentioned that, Mr. Burr.

Q. Oh, did you mention that?

A. Yes.

Q. And how extensive was it if you know?

A. Well, I don't know the cost of it. I know it extended from our building down to Long Street in Third Street.

Q. Yes, and what is the distance?

A. Oh, that may be 800 feet—six to 800 feet.

Q. It is the whole block from Long Street to Gay Street is it not?

A. That is right; and from Gay Street to our building.

Q. And from Gay Street to your building; that is on the corner of——

A. Lynn Street I think.

Q. Lynn Street and Third?

A. That is right.

Q. I don't think it is Lynn Street but maybe it is.

[fol. 2113] A. East Lynn.

Q. Yes, it is East Lynn.

A. East Lynn, Mr. Burr——

Q. Yes.

A. There is another item that does not come in the same class as these and that is we do work, sometimes, we hand it by correspondence with the plant department and that work does not get in under our architects' plans. In the Dayton-Fairview cost, the building, we paid about $3,500 for painting and lighting—light fixtures, in the early part of this year when we were getting that building ready for the cut over. That was not included in Mr. Myers' estimate. On the commercial building over here we started work there early in 1925.

Q. What do you mean by "over here"?

A. In the commercial building.

Q. In Columbus?

A. The Columbus commercial building.

Q. Very well.

A. Yes. And up to June 30, 1925, we had spent about $50,000 for additions. They covered fireproof doors, partitions, cable holes, cable vaults, battery room, putting in the metal windows with wire glass in place of the old windows. That was omitted through an oversight, from our appraisal.

Q. Well, what do you mean by "our appraisal"?

A. The Telephone Company's appraisal as gotten up by Mr. Myers.

Q. In your consideration of the value or costs of these various buildings have you reached a conclusion as to the reproduction cost new of the buildings of the company as of June 30, 1925?

A. From my supervision over Mr. Myers' work, in connection with preparing his figures, and from my knowl-
[fol. 2114] edge of what buildings should cost or had, it is my opinion that the value as shown on his Exhibit No. 1 is a conservative reproduction new cost as of June 30, 1925, exclusive of the Telephone Company's overheads.

Mr. McConnaughey: Now, we move that that be stricken out. This man is not qualified to testify to these reconstruction costs now because he has expressly stated that he made no investigation of local wage scales or material costs or anything of that kind, but left that entirely to Mr. Myers.

Commissioner Poor: I think that he has testified, he has qualified now to expressed opinion on it.

The Witness: May I say, Mr. Burr——

Commissioner Poor: The objection will be overruled.

Mr. Burr: Wait until the Commission rules—now, what were you going to say?

Mr. McConnaughey: Note exception.

The Witness: I was going to say that I did compare Mr. Myers' unit costs with actual unit costs which had been obtained by me in connection with our recent building construction in various parts of the state.

Q. Something was said yesterday about the difference between the item of engineering of the Western Electric Company or some other manufacturer referred to in Mr. Williams' appraisal with respect to central office equipment and to central office equipment engineering of the Ohio Bell Company; what is the difference between those two if you know?

A. Well, the Ohio Bell engineering consists of writing [fol. 2115] the specifications covering the central office equipment that is required as shown by information obtained from the traffic department. That is in the Ohio Bell specifications there are specified the number of sections required, the number of subscribers' positions and

rural positions and toll positions; and this is accompanied by floor plans showing the desired layout of the equipment in the building. The Western Electric Company—I think that Western Electric engineering is a misnomer—a more descriptive term would probably be "factory engineering" if you wanted to use the term "engineering" or "factory designing". That is the Western from our specifications translate our requirements into their requirements. That is they make up a list of all the different relays and cords and cord weights that will be required for this particular job, and that is used by them or their supply department for picking out the material to be shipped to this job. They also make up the drawings that are sent to the shops for manufacturing the relay racks, for cutting and forming the cables, and they make up working drawings for the installers, to be used for locating, mounting the terminal strips on the frames and racks and putting the relays on the relay racks. They show just where they are to go. They do not design any of this equipment. That is they simply use a working equipment that has been standardized.

Q. Who are "they" now?

A. The Western Electric Company. (Continuing) By the Research Department in New York. The Research Department and this factory organization are entirely sepa- [fol. 2116] rate. The Research Department designs and invents and standardizes the equipment. We get information from that organization in the way of engineering circulars.

—. What is available?

A. Describing this new equipment and its uses. The organization at the factory simply takes this standard equipment and assembles it.

Q. Is there any engineering necessary in connection with the assembling?

A. No, they call that engineering. It is known as an engineering organization and that is where this Western Electric engineering expression comes from.

Q. I see.

A. We use that, if necessary, but as I say—well, it will correspond in the building work—the work that the Western does corresponds to work that the steel company does, that is the architect will specify the number of stories and the location of the columns and the size of the columns.

The steel man makes detailed drawings of that showing how they are drilled, where the holes go, how they sit together. The marble man makes up detail shop drawings; the stone man makes up detail shop drawings. Those are shop drawings and the making of those shop drawings corresponds to the work that Mr. Williams referred to as Western Electric engineering.

Mr. Burr: I think you may stand aside unless there are other questions to be asked.

Mr. Postle: Just one question. I did not quite understand Mr. Morrill whether the wage scale applied in arriving at the cost of these buildings is the same in each locality or not, or whether the local wage scale applied in [fol. 2117] each locality.

The Witness: Well, the units that I worked with are not split up into labor and material. That is the contractors' bills that I got and his statements are so many yards of concrete and so much a cubic yard, so many thousand brick layed in the wall at so many dollars a thousand.

I think the question that you ask me is something that Mr. Myers is acquainted with better than I am, and I have simply compared his quantities of cost per unit with these that I obtained.

Mr. Burr: Through, Mr. Postle?

Mr. Postle: I am through.

The Witness: The only thing, I understood your question that you referred to these buildings that I have used.

Mr. Postle: I referred to all of them in general. I took it when you said that you were familiar with Myers' Exhibit that you were familiar——

The Witness: Of the figures he used.

Mr. Postle: Yes.

The Witness: No, I didn't go into the details that far.

(Here a short recess is taken.)

[fol. 2118] Present:

(In addition:) Honorable Charles C. Marshall, Chairman, Public Utilities Commission.

And also WALTER G. SCHNEIDER, resuming the stand for further direct-examination, continued his testimony as follows:

Examined by Mr. Burr:

Commissioner Poor: While I think of it, Mr. Burr, and have it in mind, you have it in mind before you conclude to give us the original cost of the land, of all your land?

Mr. Burr: Do you want that separately by parcels?

Commissioner Poor: I think it ought to be. We ought to have an exhibit showing insofar as you can ascertain it, what the original cost of the land to the company was, as bearing on valuation.

Mr. Burr: We will ask Mr. Up. Richards to submit that in connection with some other testimony he is going to give. Do not take that as a promise from me, but my judgment.

Q. Mr. Schneider, you have already been sworn and I think you have previously testified in this case?

A. Yes, sir.

Commissioner Maullar: What is the gentleman's first name?

Mr. Burr: Walter E.

Q. Tell the Commission what part, if any, you have [fol. 2119] taken in evaluating the property of the Ohio Bell Telephone Company covered in the 1925 appraisal put in evidence by Mr. Williams.

A. I have prepared an appraisal of the construction overheads, of the construction work in progress, the miscellaneous construction expenditures and the cost of establishing the business.

Q. The first of the so-called construction overhead or indirect costs is what?

A. Omissions.

Q. Have you evaluated that item for the property of the company in this case?

A. I have.

Q. Will you please tell the Commission first what you have included in omissions and how you arrived at the amount evaluated for that purpose?

A. On page 110 to page 116 inclusive of Williams' Exhibit 7-C are enumerated some of the omissions which are usually found in the making of an inventory and appraisal. Besides these items listed and tabulated on the aforementioned pages, I have outlined in my testimony given in Janu-

ary 1925, a considerable number of items to be considered in omissions. At the time I gave my testimony in January of last year, I stated that the usual method for ascertaining the amount to be allowed for omissions, is to apply a percentage to a given figure. The percentage to be allowed is to be applied to all of the direct costs as testified to by Mr. Williams, the figure being $107,251 561.00 as the reproduction cost new of plant and equipment as of June 30, 1925.

In an inventory covering state-wide property such as is now under consideration, there are bound to be omissions [fol. 2120] of one kind or another. There are omissions of such kind as concealed objects. There are omissions due to under-counting. There are omissions made due to the instructions given to me- who make the inventories, who are instructed to omit certain small items because the cost of inventorying is excessive. There are the omissions of extra costs over and above which are allowed in making the appraisal.

Q. Extra costs of what kind?

A. Both handling and shipment or transportation costs.

Q. Proceed.

A. I have been engaged in making inventories for the past 12 years—12 or 13 years,—in making them personally and supervising others, and I have had occasion from time to time to make checks of these inventories, and in every case I have been able to discover omissions. I know they are made and I know that it is not humanly possible for any person to count all the items entering into as complicated a structure as this.

I might take the separate items constituting this property and discuss some of the possible omissions and some of the omissions which I know are in this appraisal.

Q. I wish you would do that beginning with the item of land.

A. The appraisal which we have of land which was furnished by the real estate boards, or appraisal committees of real estate boards, do not include anything but the bare value of the land as they in their judgment thought was proper. We have so far as the telephone company is concerned, the cost of making searches for titles. We have also the cost of structures which might exist on the land [fol. 2121] at the time of appraisal. In reproducing land

today, the real estate board of their appraisal committee have in every cases assumed the land to be bare of any improvements. However, it has been the experience of the Telephone Company in purchasing property that in many cases some sort of a structure exists on a property. At the time of removal of that structure it should be charged to the land cost; that is in accordance with the uniform system of accounts prescribed by the Interstate Commerce Commission.

In reproducing our land today, it would not be conceivable that all of the parcels owned by the company would be free of such improvements. There would be some parcels having improvements on them.

We have also to consider the cost incident to examining titles on property which is not purchased. We may desire to purchase a site and instruct our real estate broker to make an investigation and he finds that the title is not good, therefore we abandon that project although there has been some expense incident to the making of that thing.

Mr. McConnaughey: Well, if the Commission please, that certainly is not a thing to be considered.

The Witness: Those things will be met in the reproduction of the property, Mr. McConnaughey, just as we meet them in our actual operations from day to day.

Mr. McConnaughey: We move that that be stricken out as an element of omissions.

Commissioner Poor: Read that statement please.

(Previous statement read.)

[fol. 2122] Mr. Burr: Similar to preliminary plans in engineering.

Commissioner Poor: How could that become a part of the value in existing property that the company does own?

Mr. Tolles: You are now on the question of cost of reproducing.

Commissioner Poor: Of reappraising the property that you now have.

Mr. Tolles: Yes.

Commissioner Poor: Not what you might have had or what you would have liked to have had, but the property that you have.

Mr. Tolles: Well, his theory is simply this, that in getting together the large body of property that this company

has, the large number of pieces, they are bound in so doing to meet to some extent that kind of an expense; that it does actually occur.

Mr. McConnaughey: Of course we are not dealing with a hypothetical property. We are dealing with the property as is, and the idea of considering something that they might have looked at is an entirely different proposition. It is not the idea of standing out to build a property that is not planned, laid out and determined; the idea of building the property that is actually before us and in possession of the company that we are working on here. It is the property that is used and useful in the telephone service that we are to determine the value of.

Mr. Burr: It is the reproduction cost new of that property.

[fol. 2123] Mr. McConnaughey: We might examine the title of something that they determined finally is not the proper property to use; it would not be available to them for some reason or another. There is certain expense connected with that. Why, there is one of their errors that certainly cannot be made good.

Chairman Marshall: Suppose, Mr. McConnaughey, you were going to reproduce a property, isn't that an overhead that you would be entitled to a preliminary examination for the purpose of discovering or deciding whether a property would be?

Mr. McConnaughey: My answer to that is that what we are determining is the value of the property that is now being used; it is not the idea of going out and devising a new system. The company has, as I said, been bringing in their property as is, and we are quite sure that they have brought in a whole lot of property that is not as useful as it might be but still they insist upon putting it in.

Now, this is the other side of the proposition. They ought not to be permitted to include an expense here for property that they are not using for telephone service. We are not bound, the state is not bound, the law is not bound to reimburse them for every dollar of expense that they incurred. There isn't any basis for that claim, simply because there may be no convenient place to put something that they have expended and that brought them nothing, does not mean that they are going to put it into their rate base, certainly.

[fol. 2124] Mr. Burr: My part is this, Mr. McCon-

naughey, in acquiring a property of this size and acquiring the several parcels of real estate which go to make up the property, it is to be expected that some of the real estate which you would like to buy and which you begin to buy should turn out to be non-available and non-useable, because of the fact that its title is defective. In fact I had in mind a case where I had to reject a piece of property that the company wanted for central office purposes.

Now then the search of the title and the examination of it costs money, and when the company has rejected the title and gone some place else because perforce it had to, there is that expense. You may say it is a futile expense, if you want to, in that it does not produce you a property which the company could purchase, but it is a part of the natural and necessary and inevitable cost of getting the land which you finally buy.

I don't care particularly whether the item is discussed by Mr. Schneider under the head of land omissions, or he can discuss it under any other heading he pleases, because it is an item of expense that has been arrived at in the appraisal; it is a part of the cost of the property that has been left out from any particular valuation. It does not make any difference whether you call it an omission relative to land or an omission relative to buildings, first or last, it is an omission.

Mr. McConnaughey: Well, here is another thing that you suggest to me. There isn't any evidence that such a thing [fol. 2125] as that has ever occurred. It is just one of the things that might occur. Now, certainly we are not going to appraise in this case all the things that might have been. Let us get down to earth, the real thing that they are using.

Commissioner Poor: Won't that be analagous to your attempting to claim an item under omissions for a law expense or to obtain a certificate of public convenience and necessity in some town where you try to get the right to operate and don't say for instance in Cincinnati, where you tried to obtain a certificate of public convenience and necessity to operate in Cincinnati, and had extensive reports in reference to it, and finally were turned down and did not get that certificate?

Well now, it seems to me the thing that you are entitled to have a valuation placed on, a reproduction valuation, as I said before, of the property that you are now operating

and not what you might have operated or what you might have wanted to operate.

Mr. Burr: Of course the difference in the two situations is this, Your Honor. Here is an expense for which we are in no respect responsible; that is to say we have no way of knowing in advance whether a title is good or not, but we do know that the telephone company very much wants that particular piece of property. In the case of the application for a certificate of necessity to operate a bus line, if I should go into a community and try to get such certificate——

Commissioner Poor: I did not mean a bus line; I meant to operate the telephone company.

Mr. Burr: Well, all right, to operate the telephone com-
[fol. 2126] pany if you please. I am supposed to know both from the standpoint of fact and the standpoint of law whether or not I am entitled to such a certificate, and if I go into some place and fail to get it, it is my own fault.

Here the failure of the title is in no sense the fault of the Telephone Company. But we are taking a great deal of time over something that is not so very important after all and I suggest the Commission make the ruling on it and we will go on with it to the next item.

Commissioner Poor: The Commission will sustain the objection, then.

Mr. Burr: Note the exception.

The Witness: I don't know whether I mentioned the cost of abstracting and recording fees. Now, it is usual in real estate transactions that the seller pay the brokerage commission, but there are cases where the Telephone Company does pay as a purchaser, possible commissions to the broker. Nothing is allowed in any of the figures which have been testified to relative to the value of the various parcels.

That in general I think covers the major omissions which occur in land and which have occurred in this appraisal.

Q. When you were discussing——

Mr. Tolles: Can you get your titles examined without paying somebody?

The Witness: I think I mentioned that.

Mr. Tolles: Well, you said abstracts.

The Witness: Well, I think I mentioned that as one of the first things. If I did not, that is another element to be
[fol. 2127] considered.

Mr. Tolles: You have been getting off like that. I wanted you to continue.

Q. When you referred to your buildings located on property purchased by the company, did you have in mind structures which the company has been obliged to pay for but which it didn't use?

A. A price which a particular company pays for a parcel of land which includes an improvement, would naturally include something for that improvement.

Q. Have there been cases which you know of where the company has paid for buildings of that sort and has not used them?

A. Yes, sir, I think so. Account 111, as testified to by Mr. Williams, includes just that kind of property.

Mr. Tolles: He spoke of several of them.

The Witness: Yes.

Q. Have you any further omissions to discuss with respect to the item of land?

A. No, I think the items that I have discussed cover that subject.

Q. Take up next, if you please, omissions referable to the building account.

A. On page 110 of Williams' Exhibit 7-C are enumerated seven items of omission generally found in building appraisals. Mr. Myers has testified to figures or to items which he has not included in his appraisal of the buildings, but which he has said do exist. Mr. Morrill has testified to the omission of various items and also has testified in considerable detail as to what some of those items were, by giving specific details as to location and name of the omission. I think that with those two gentlemen's [fol. 2128] statements, together with that listed on page 110 of Williams' Exhibit 7-C that the question of omissions relative to building appraisal is pretty well covered.

Q. Supplementing those examples, however, what have you to say as to omissions with respect to installations in leased quarters? I think that has not been touched by the witnesses so far.

A. No, both Mr. Myers and Morrill have not touched, I doubt if any, on the structures housing our equipment, the structures which we lease. There are a large number of exchanges or offices located throughout the state where the

Telephone Company has made improvements of one kind or another. Mr. Williams has added something in his "Other equipment of central office", and "Office furniture and fixtures" for some of those expenditures, but there are other items which he has omitted. Probably the main item is the expense incident to the installation of toilet facilities, partitions of one kind or another. Those things have been omitted from this appraisal.

Q. What have you to say with respect to the item of shoring as protection for adjacent properties?

A. Mr. Myers, in testifying relative to his appraisal, has not included shoring. That is essential, particularly if there are structures of any magnitude adjacent to the property on which we expect to build. A good example of that at the present time is our new Main-Central office building in Cleveland where we are going through a considerable amount of expenditure to maintain the structures on either side of the excavation which we expect to occupy.

[fol. 2129] Q. Do you know anything about the amount—the cost?

A. I have heard that it will probably cost $100,000 to maintain the Caxton Building which is adjacent to our building, in its present state.

Q. Well, what have you to say with respect to omissions——

Mr. Tolles: That is quite correct.

Mr. Burr: Touch you on a sore spot?

Mr. Tolles: On my neck, somewhere.

Q. (Previous question read as follows: "What have you to say with respect to omissions referable to central office equipment, Mr. Schneider?")

Chairman Marshall: I think Mr. Tolles would make a good witness.

Mr. Tolles: I would on that subject.

The Witness: The omissions in central office equipment would occur in the making of the inventory. There are thousands of parts—multitudes of parts, and it is not possible to go into a central office and count each and every part. Then besides the lack of a 100 per cent. count there also are certain particular items which are omitted, such as are listed on page 110, jumper wire, relays, and rolling ladders and some of the electric light fixtures and things of that character.

Q. What about "other equipment of central office"?

A. That equipment is student or school equipment, kitchen utensils and furniture, rest room, retiring room in quarters provided for the operators; the appraisal of that or the inventory of that was made by count, and we would find a certain number of items having been omitted on account of the fact that a 100 per cent. count is out of the question.

[fol. 2130] Q. Will you give examples of omissions with respect to the outside distributing system of the company?

A. That would include pole lines, wire, exchange underground and aerial cable and conduit.

Q. Yes.

A. That type of plant probably represents the most difficult of all to inventory owing to the fact that it is scattered throughout the state. It is dissimilar from central office equipment, which is housed within four walls and a room.

The outside plant omissions may be due to various things: First, there is the lack of counting all the items which exist. That is a human failing. Then there is the fact of concealment of objects, as well as may be set in concrete; they may be butt re-enforced under the ground line; they may be self-supported by planks located underground.

Q. You say those may be; is that true?

A. Well, we have some poles in our plant.

Q. Yes, proceed?

A. Anchorage equipment below ground is not visible and therefore it is usually,—it is possible to omit some of those items, such items have been omitted in inventories that I know of.

Pole lines scattered, two, three or four poles, off of a main line, are omitted from inventories.

Wire on other company's poles, on foreign company poles, is very easily missed and has been missed in inventories which we have made in the past.

Small items of outside plant equipment are sometimes [fol. 2131] omitted because the men have been instructed to omit them rather than spend the time and money for a count.

Q. What about the item of wire sag?

A. The inventory is made on the basis of measurement

on ground line. That, of course, eliminates the sag in wires and cables which naturally reflects as an omission.

The extra handling charges of material and the extra transportation charges are an item to be considered. In this appraisal we have assumed carload lots shipped to a common shipping point, using the freight classification which the railroads use in connection with their traffic work.

However, it has been our experience in the past—and we are experiencing it every day—that we have express shipments to us, we have special shipments and we have shipments less than carload lots. Those costs are in addition to the cost such as we have used in our appraisal and are naturally an item which should be considered in connection with omissions.

Q. What about bridle wires?

A. Bridle wires are the connection between line wires and terminals and are of small consequence as an individual item, but of considerable value when taken as a whole and there are omissions in that unless each and every pole having bridle wires is climbed and those wires counted, which is not the usual practice. There will be some omissions in bridle wire.

Q. Are those omissions with respect to cables represented by cable sag?

A. There are.

[fol. 2132] Q. And is the same thing true as to messenger sag?

A. There will be omissions in aerial cable and the messenger used in supporting that cable due to the sag, because the measurements as used in the inventory reflect ground line measurements.

The same could also be said and is true of submarine cable owing to the fact that we had no knowledge of the contour of the land on which this particular cable might lay.

Q. And you measure——

A. And we have used straight line measurement.

Q. What about the omissions of splice and terminal equipment; perhaps you can discuss those together?

A. The splice or construction splices have been included in the inventory. There, however, is a chance, and it has

been found true, that splices which our people have taken and judged as trouble splices, are construction splices and we have therefore some omissions in splicing. The terminals, having equipment such as fuses, carbon cutouts usually are undercounted; that is the equipment they are in is undercounted. The jumper wires or cross-connecting wires located in those terminals in many cases, is a matter of omission.

Q. Is your testimony with respect to omissions limited to the exchange property of the company only or does it include both toll and exchange?

A. It includes both toll and exchange although it is my judgment that the omissions which will occur in the toll property probably will be slightly less than the exchange property.

[fol. 2133] Q. Are there any omissions represented by items comprising the underground conduit; if so what are they?

A. The underground conduit is a plant which is practically concealed with the exception of that which is visible at the manholes. It is not possible to inspect that plant and inventory it 100 per cent on account of the lack of facts as to the type of construction between manholes. We know what our standard construction is and that standard construction is usually top and bottom concrete. Owing to pockets of various types in the soil between adjacent manholes, it may be necessary that a particular run shall be complete-encased in concrete. We may have found pockets which would require the fil-ing of concrete before the conduit may be placed, in order that there will be no failure of the conduit after it is placed, and permit the continuity of our use. Those things are not visible and no allowances have been made for those omissions in the unit costs which have been used. There is also the chance in underground conduit of a considerable amount of breakage of tile in the handling of tile from the supply yards to the location where it is to be installed, and the hazards to which it is subjected while it is in there in the process of construction. An allowance has been made in the unit costs for breakage but that allowance has no relationship to the amount of omissions which may occur, the breakage item being something which is extraneous.

Q. And in what respect does your last answer apply, if any, to underground cable?

A. The underground cable omissions should not be of a [fol. 2134] considerable amount owing to the fact that there are no splices located between manholes—or there should not be under good construction. Everything so far as splicing points are visible in the manholes. There, however, is one item which should be considered and that is the contour between manholes. If the contour is in the shape of a curve or has any bends, those not being visible, the inventory-or field-men usually measure in a straight line between manholes, therefore, anything, either up and down contour or horizontal curves would not be considered in such measurements.

Q. Are the any omissions referable to the item of right of way?

A. There are two big items in the right of way which have not been considered wholly in our unit costs. The one is based on the rights which citizens have relative to the placing of poles in front of their property. They have certain rights which the courts have maintained are theirs.

I refer particularly to this Watson case which was decided last Spring, the Spring of 1924.

Another point which we have not given fully account for is in reproducing our toll lines and our exchange property. We have assumed that the right of way which we occupy and enjoy today has no trees or brushes other than as exists. However, if the lines did not exist today, and we were going out to reproduce our lines, in a large number of cases, we would have trees and shrubs of various kinds grown up into what we occupy as right of way. They have been cleaned [fol. 2135] out, but we have not given any thought to that in the right of way figures which have been computed, and I think that is a considerable omission. To conceive of a cleared right of way throughout the State of Ohio for all of our wire and poles is rather absurd and in my judgment the amount of right of way which we have included in this appraisal is conservative to say the least.

Q. Let me ask in that connection whether some of your right of way particularly in the southeastern part of the state does not go cross country up and down hills and through the woods, not following the highways?

A. That is right. It is purchased private right of way. In connection with the building of new highways, I understand that several statutes have been passed which are another

burden upon the company insofar as old construction is concerned on the state highways.

Q. Yes. Give some examples of omissions with respect to station equipment if you will, Mr. Schneider?

A. Mr. Williams mentioned some this morning and besides those there are a few listed on page 110.

Q. Of what?

A. Of Williams Exhibit 7-C. On station apparatus we have the possible omission and we have found omissions for bells, buzzers, and small miscellaneous items of that character.

In station installations, the omissions should be right slight owing to the method in which Mr. Williams has ascertained his costs.

Q. What about installation on premises where service [fol. 2136] has been discontinued?

A. Those installations located on premises where service has been disconnected have not been included in the inventory although in my estimation, in my judgment they are part of the used and useful property and due allowance should be given for those installations.

Q. What about the omissions with respect to private branch exchanges?

A. The omissions in private branch exchanges, particularly of the larger type would follow those of central office equipment. Our private branch exchanges are located on premises of others and in many cases it is necessary to do a large amount of concealed work. A man inventorying such work being at a loss to know the particular routes of cables and wires usually takes what he assumes to be the logical route or the shortest route and we have found in many cases of the larger type of P. B. X. installations that there are omissions of wire and cable.

Q. Have you found instances of omissions in the case of interior block wires?

A. That is one of the most difficult types of plant inventory. Interior block wires and interior block cable is located usually in the congested areas of our larger cities and the wires are placed under buildings, they run between small area-ways where it is almost impossible to get in; they pass through walls and out of walls and it is the most difficult thing to make measurements when given and it is almost impossible to count all of those wires which are located within the average congested area block of our large cities.

Q. How have you appraised the item of omitted property [fol. 2137] in this case?

A. In my judgment, the appraisal of omissions should be made on the basis of a percentage; that is what I have done in this case. I have used two per cent as a conservative figure representing my judgment of the amount of omissions existing in the appraisal made by Mr. Williams of the physical plant. I have used two per cent of $107,251,561.00, or making the allowance or appraisal of omissions as $2,145,031.00.

Q. And bringing the appraisal down to what amount?

A. That would bring the appraisal down to a figure of $109,396,592.00.

Q. I wish you would discuss next the item of engineering and tell the Commission how you have evaluated it?

Commissioner Poor: Before you leave that, did you mention that old gray horse that Mr. Williams had one time?

Mr. Williams: He missed that one.

The Witness: I missed that.

Mr. Williams: I took it away from him, but now I will return it.

Commissioner Poor: That is an old friend; we ought to have it.

The Witness: He has died since. He is off of the books.

Q. There was the old case of the carriage that was left out entirely; you didn't talk about that.

Mr. Williams: That is still out. He missed it.

The Witness: Yes, that and I missed a piece of cable of the High Street viaduct.

[fol. 2138] Mr. Burr: Yes, yes. That is another one.

The Witness: Mr. Williams missed all of the additions on other equipment in the central office other than station equipment; Mr. Morrill missed the $40,000.00 item in the Commercial Building over here.

Chairman Marshall: Don't rescue anymore; they have got a lot that is dead and nobody knows it.

The Witness: I can give you, if you wish, my idea of about what allowance should be made for each class of property.

Q. Yes, I would be glad to have you do that.

Mr. McConnaughey: Allowance for what?

The Witness: For omissions.

Mr. McConnaughey: All right.

The Witness: About one per cent for land. One one half per cent for buildings. One per cent for central office telephone equipment. Two per cent for other equipment for central offices; one half of a per cent for station apparatus. One half of a per cent for station installations. Five per cent for interior block wires. Two per cent for private branch exchanges. Five per cent for booths and special fittings.

Q. Now, these are per cents of what?

A. Per cents of Mr. Williams' reproduction cost new.

Q. Of these respective classes of plant?

A. Correct.

Q. Proceed?

A. Four per cent for exchange pole lines. Two per cent for exchange aerial cable. Four per cent for exchange aerial wire. Two per cent for exchange under ground conduit. [fol. 2139] Two per cent for exchange underground cable. Five per cent for exchange submarine cable. Three per cent for toll pole lines. Two per cent for toll aerial wire. Two per cent for toll aerical cable. Two per cent for toll underground conduit. Two per cent for toll underground cable. Five per cent for toll submarine cable, and from three to five per cent for right of way.

These percentages that I have just quoted are my judgments as to the omissions in the inventory of appraisal including consideration of all of the omissions which Mr. Morrill, Mr. Myers and Mr. Williams has testified to together with my judgment as to the omissions which are generally encountered in the inventories of this character.

Q. What is the composite defense that you arrive at?

A. I don't know.

Q. You do not know?

A. No.

Q. Taking up next the item of engineering, will you tell the Commission how you have evaluated it?

A. In my testimony in January, 1925, I discussed the subject of engineering costs, engineering activities, and the accomplishments of the engineering department of the Ohio Bell Telephone Company for the year 1924, in considerable detail.

At that time, I testified that engineering in connection with a property the size of it should be evaluated on the basis of a percentage applied to some factor. On pages 117 and

118 of Mr. Williams' Exhibit 7-C is a discussion of engineering in a general way together with the authority for such costs. In building or constructing or purchasing property [fol. 2140] such as the Ohio Bell Telephone Company possesses in the State of Ohio, it would be necessary to have a considerable amount of expenditures incident to engineering work. There would be the engineering surveys and advice rendered by the General Staff of the American Telephone and Telegraph Company incident to the four and a half per cent License contract.

Those I have not included nor will I include in the discussion which is to follow. We have the expenditures for engineering as done by the Ohio Bell Telephone Company.

Q. Will your discussion include the engineering done by any other company than the Ohio Bell?

A. No, sir.

Q. Go ahead?

A. On page 117 there are listed 13 kinds of engineering work or functions performed by the engineers of the Ohio Bell Telephone Company. They may be divided into six general heads. That is commercial, traffic, plant, equipment, building, and transmission protection. There are some other engineering activities, but I think those six are prime ones. I have made a study of the engineering expense of the Central Union Telephone Company, the Illinois, Indiana and Ohio Divisions of that company; I have made a study of the former Ohio Bell Telephone Company and I have made a study relative to engineering for the present Ohio Bell Telephone Company. All of the studies which I have made indicated that the cost of engineering is in excess of five per cent.

Q. How do they indicate?

A. By making an anlysis of the statistics for engineering on new construction, knowing the amount of new construc- [fol. 2141] tion, knowing the cost of engineering that new construction, I was able to ascertain a ratio or percentage between, between the cost of engineering and the cost of the property which was engineered.

Q. Are you now talking about actual construction by the company?

A. Actual construction by the company and actually engineered by the company.

Q. All right, proceed?

A. Since the present Ohio Bell Telephone Company has

been in existence, which was since September 21, 1921, the actual engineering expense expressed in a ratio of actual new construction engineered is in excess of five per cent for and all years.

Q. Five per cent of what?

A. Five per cent of the property which was constructed. I have analyzed these figures and studied and it is my judgment that five per cent would be the minimum amount necessary to engineer and design the property now owned by the Ohio Bell Telephone Company in the State of Ohio, that five per cent being computed on the reproduction cost new of the plant as testified to by Mr. Williams plus the omissions.

Mr. McConnaughey: Mr. Schneider, may I ask you—you say that the actual experience of the company has been in excess of five per cent.

The Witness: Yes, sir.

Q. Do you mean slightly in excess or considerably in excess; how much in excess?

The Witness: From a half to almost two per cent.

Mr. McConnaughey: Well, from a half—will vary in dif-
[fol. 2142] ferent periods varying in different years.

The Witness: Varied in different years, yes.

Mr. McConnaughey: From five to seven per cent then?

The Witness: Approximately, yes.

Mr. McConnaughey: Five and one half-seven.

Mr. Leach: May I ask, does that also include land?

The Witness: Five per cent of property including land, buildings, outside plants, station equipment.

Mr. Leach: What has been that experience on land?

The Witness: Well, we didn't keep our engineering figures as between the several classes of plant. The engineering in connction with land, however, is a considerable amount. We draw up fundamental plants which indicate to us where property should be acquired. Our engineering people then make studies relative to the size of the parcel of property so acquired and it has been the function of the chief engineer to negotiate with the brokers relative to the purchasing of real estate.

Q. I don't know whether Mr. Leach understood you or whether you understood his question; it seemed to me that Mr. Leach was asking you whether the amount, on the

amount of property which showed from five to seven per cent for engineering, included land; was that what you wanted?

Mr. Leach: That is what I primarily wanted, yes.

The Witness: Yes, it does, it includes all the land that we carry in our capital accounts, acquired during the period when I made my independent study.

Q. That five to seven per cent, does that apply to an [fol. 2143] average period for all classes of property or is that an average figure for all classes of property?

A. Yes.

Q. That will answer Mr. Leach?

A. Yes, that is. The amount of engineering which in my judgment would be necessary is $5,469,830.00, as indicated in Mr. Williams' Exhibit 7-C on page 118.

Q. Is that a part of the reproduction cost new of the property of the Ohio Bell Telephone Company?

A. Absolutely.

Q. As of what date?

A. June 30, 1925.

Mr. Burr: We can start on another item——

Commissioner Poor: If you are not sure that you can get through with another——

Mr. Burr: We cannot finish another item.

Commissioner Poor: I believe it would be advisable not to start it since it is only about five minutes more to 4:30 anyway.

Well, then, it is the general understanding is it that we have three days set aside, January 26, 27 and 28 for further hearing.

The Witness: 27, 28, 29.

Commissioner Poor: Is it 27, 28, 29.

Mr. Burr: 27, 28 to 29.

Commissioner Poor: This matter will be continued until Wednesday Morning, January 27, at 10:00 o'clock, Columbus time.

And thereupon the further hearing of this matter was adjourned until Wednesday, January 27, 1926, at ten o'clock A. M. Eastern Time.

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[fol. 2144] And also WALTER G. SCHNEIDER, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, continued his testimony, as follows:

Examined by Mr. Burr:

Q. At the close of the last hearing you had been evaluating the indirect or construction over-head costs of The Ohio Bell Telephone Company as shown in its appraisal.

Directing your attention again for a moment to the item of omissions, will you tell the Commission of some of the omissions which have occurred to you since the last hearing.

A. Since the last hearing and on my return to Cleveland, I have had occasion to check through various data in our office, and I find that there are two large omissions which I did not testify to at the last hearing, and which I think should be mentioned at this time; that in connection with land, each and every parcel of property that we own has been surveyed; all of the surveying costs have been omitted from the valuation as testified to heretofore. That is the surveying cost incident to all of the land shown on pages 1 to 17 inclusive of Williams Exhibit 7a.

Q. Approximately ninety parcels?

A. More than ninety parcels, counting the miscellaneous investments.

Q. What do you know of the cost of such surveys?

A. A reasonable cost for surveying parcels as an average would be in excess of one hundred dollars per parcel.

[fol. 2145] Q. What other items of omissions have you found?

Mr. Tolles: Well, in connection with that land, have you considered at all escrows and examinations of title that occur in almost every case? I know a good many transactions go through our offices and there is almost always involved an escrow with the title companies, which costs you some money.

The Witness: I think in my previous testimony I mentioned the fact that no costs were included for title search or any recording of deeds, and so forth. I think that was mentioned as one of the omissions.

Mr. Dotson: Mr. Schneider has testified that the reasonable cost, if I understood him correct, is one hundred dollars per parcel. Are you going to leave it in that shape,

Mr. Burr? If you are, I want to object to the testimony and ask to have it stricken out because I do not think it is competent. He is testifying as to certain omissions. Now how do they arrive at the amount that they say was omitted? That testimony don't throw any light on it.

Mr. Burr: We could prepare a statement so itemized as to show the cost of the surveys, but inasmuch as Mr. Schneider has been discussing the matter of surveys, under the heading of omissions and their not being evaluated as a part of any particular piece of property, we had supposed that his general statement on the subject would be sufficient. If, however, the demand is made for an itemized statement of the cost of recent surveys, I think that that can be produced.

[fol. 2146] Chairman Marshall: Do counsel want such an itemized statement?

Mr. Dotson: Well we can probably reach it by cross-examination later on.

Chairman Marshall: All right; go ahead.

Mr. Dotson: We are calling attention to the fact as it stands now.

By Mr. Burr:

Q. What other items of omissions have come to your notice since your previous testimony on the subject?

A. The latter part of 1924, and within the first six months of 1925, the Ohio Bell Telephone Company acquired from the American Telephone and Telegraph Company certain central office equipment, other equipment of central offices, and certain items classified as buildings in the main office of Cleveland. The amount of compensation, or the reproduction cost new rather of the equipment so acquired, was approximately four hundred thousand dollars. This equipment, other equipment of central offices and buildings was omitted from Mr. Williams' inventory and is therefore omitted in his appraisal.

Mr. McConnaughey: Can't you be a little more specific as to just what that property was?

The Witness: That property was related with the toll equipment in Cleveland.

Mr. Dotson: Is that carried in your inventory under the provision of Omissions,—the inventory that is submitted here?

The Witness: It is not in the inventory nor in the ap- [fol. 2147] praisal. I might mention that we have an omission of about $7000 or $8000 in central office equipment in Toledo by virtue of a purchase from the American Telephone & Telegraph Company during this same period that I have mentioned relative to the purchase of equipment in Cleveland. This has also been omitted both from the inventory and from the appraisal as submitted by Mr. Williams.

By Mr. Burr:

Q. Before you proceed any further, let me ask you whether any of this construction over-heads to which you are testifying include anything which the Ohio Bell Telephone Company receives by way of services from the American Company under the license contract?

A. Absolutely none.

Q. With respect to the item of engineering, under that heading you discussed at the former hearing engineering charges prescribed by different engineering associations, and I believe that objection was made to your testimony because of the fact that you had not then available any actual percentages, fixed by those associations. Tell the Commission whether or not you are now in possession of those percentages.

A. I am.

Q. Will you discuss the subject briefly?

A. In my testimony in January a year ago, I endeavored in connection with the subject of inventories relative to the cost for engineering, to explain what large outside consulting engineers do with respect to their costs.

I have secured some figures from the Code of Ethics prepared by various associations of consulting engineers, and [fol. 2148] in my judgment they reflect, in a way, what would be the engineering costs in reproducing a property like the Ohio Bell Telephone Company if it were to be done by such outside engineers.

In the Code of Ethics of the Pittsburgh Association of Consulting Engineers, I would like to quote the following from paragraph C:

"Percentages on the cost of work; for making preliminary studies, work drawings, specifications and contracts and for the general direction and supervision of the work

in view of a per diem or fixed sum, the minimum charge shall be 5% upon the entire cost of the work exclusive of legal and administration costs."

Mr. McConnaughey: Is it understood that this appraisal has been made on the basis of the employment of outside consulting engineers?

The Witness: No, sir; I said that if this reproduction of the property were to be done by outside engineers, that their charges would be in line with those that I am now quoting. I think that is one measure of arriving at the amount of engineering that inheres in this property.

Mr. McConnaughey: All right.

The Witness: The Engineers' Club of St. Louis endorsed a schedule of fees and charges from which the following is quoted:

"For preliminary study and report, preparing detailed drawings and specifications, awarding contracts and acting in a general supervisory capacity during construction, in- [fol. 2149] cluding office consultation, but not including continuous supervision, instruction, testing or management, work costing $10,000 or more, 5 per cent.

"For work costing less than $10,000 it is proper to charge a fee in excess of 5 per cent.

"For full professional services and management, including preliminary studies detailed drawings and specifications, awarding contracts, active and continuous supervision, testing and inspection, work costing $10,000 or more, 10%."

The American Institute of Consulting Engineers, in its Code of Ethics and Schedule of Fees for 1923, provides that charges for consultations, studies, opinions, reports, court proceedings and expert testimony vary according to the magnitude and importance of the work and subject involved and the experience and reputation of the engineer, from $100 per diem to a much higher figure, time occupied in necessary travelling being charged as a part of the work.

The schedule provides for percentage charges on the cost of work as follows: for preliminary examinations, surveys, studies, plans and reports on new projects, or for review, study and report on projects previously dealt with by other engineers, from 1½ to 3 per cent or more upon the estimated cost of the work, depending upon the character and importance of the service rendered.

If in addition to this, the services include investigations, plans and specifications necessary to enable contractors to submit different tenders for construction, from 2½ to 5 [fol. 2150] per cent or more, upon the estimated cost of the work.

If in addition to this, final working drawings, specifications and advice are required, and also consultation and general advice during construction, from 5 to 7½ per cent or more upon the estimated cost of the work.

If full professional services are required including the awarding of contracts, construction, management, testing of materials, inspection of work, responsibility for the organization and management of the work and carrying it to completion, from 10 to 12½ per cent or more, upon the actual cost of the work.

Mr. McConnaughey: What association was that last from? I missed that.

The Witness: That was from the American Institute of Consulting Engineers. I think that is an Eastern concern, or an Eastern institute.

Mr. McConnaughey: All right.

By Mr. Burr:

Q. With respect to the next item shown in the appraisal as general expense, I believe you have already discussed the character of general expenses in your previous testimony. Will you make a brief reference to what you formerly said on the subject in order to bring the matter down to date, and then discuss some of the items which are included in the main item of general expense?

A. A year ago this month, in connection with the inventory which was filed by Mr. Williams, I testified to the general expense item as part of that inventory. At that [fol. 2151] time I divided the general expenses into two major items, one being the expense of organizing the company and the other being the expense which obtains by way of supervising our people who are constructing the property.

In order to reproduce the property of the Ohio Bell Telephone Company as it existed on June 30th, 1925, the company necessarily would have organization expense which involves expenditures for payments or fees to both the state and federal governments for the right to incorporate and

operate. It would involve the cost of documentary stamps. It would involve all of the legal fees in connection with such an organization. Expenditures for stock listing would be another cost.

Q. Stock listing where?

A. On the stock exchanges. The cost incident to issuing mortgage securities; all of the fees and expenses incident to the costs which I have mentioned, together with rent, heat, light and other house services.

At the present time the Ohio Bell Telephone Company is an operating company and it has certain general officers and subordinates.

At the time of reproduction the activities of the company would be more in the line of construction, rather than operation, and for that reason the general expenses chargeable to construction expressed as a ratio would be somewhat higher than is the case where the company is considered as an operating concern.

[fol. 2152] In reproducing this property it would be necessary for the company to carry insurance of various kinds which, as an operating company, would be charged to operating expenses; but for a company which is under construction they would have to be charged to construction or fixed capital. The major types of insurance would be fire insurance and public liability insurance.

Q. Just a moment, Mr. Schneider; will any of these costs to which you are now testifying be included or duplicated in the item representing the cost of establishing business to which you will later testify?

A. No, sir.

Q. Proceed.

A. Another item of expense which, as an operating company, would be charged to operating expenses, but which for a company which is in the process of construction or reproduction, would necessarily have to be met and which would be inevitable in reproduction, are those costs incident to securing bills of necessity and convenience and the filing of a schedule of rates before this Commission.

Summarizing all of these costs, it is my judgment that a minimum of 2 per cent should be added to the cost of the property for general expenses chargeable to the reproduction of this property.

Q. Leaving out of consideration attorneys' fees and

other fees, what, if you know, was the fee paid by the Ohio Bell Telephone Company to the Secretary of State at the time of its birth, that is to say when the consolidation between the Ohio State Telephone Company and the old Ohio [fol. 2153] Bell Telephone Company became effective.

A. I did have those figures at one time; I think they are something around one hundred thousand dollars.

Mr. Dotson: What do you call that, Mr. Burr; organization expense?

Mr. Burr: That is a part of the organization expense.

Mr. Tolles: The fee to the Secretary of State, in other words?

Mr. Burr: Before the company can become a corporation.

By Mr. Burr:

Q. What have you to say with respect to the item of Workmen's Compensation in connection with the reproduction of the property?

A. That of course is necessary in the State of Ohio. They have such an Act in force at the present time and it is necessary for the company to insure its workers, and in reproducing this property it would be necessary that the Workmen's Compensation be provided for.

Mr. Leach: May I ask, Mr. Schneider, whether or not Workmen's Compensation in your appraisal is carried as an over-head or as a labor cost in unit prices?

The Witness: It is carried in this general expense item that I have testified to.

Mr. Leach: It does not appear in unit prices?

The Witness: No, sir, I do not think it does; I think Mr. Williams excluded that.

Mr. Williams: It is not in the unit costs.

By Mr. Burr:

Q. You referred to insurance necessary to be carried during the period of reproduction of the property, to what sorts of insurance did you refer?

[fol. 2154] A. Primarily to fire and public liability.

Mr. McConnaughey: What do you mean by "public liability"?

The Witness: That insurance is the insurance which the

company would necessarily have to take out in connection with the protection of the public relative to accidents, etc., incident to the construction work.

Mr. Dotson: Do they carry that kind of insurance?

The Witness: I think they do.

Mr. Dotson: Well, do you know, or not?

The Witness: They do.

By Mr. Burr:

Q. You have reference, have you not, to such damages as might accrue from explosions during construction during which some of the public might be injured?

A. Yes, sir.

Q. Or the caving in of adjacent property?

A. Yes, sir.

Q. Accidents caused, for example, by the falling of a beam to a sidewalk and injuring passers-by?

A. Yes, sir; accidents which would occur in connection with our construction of conduit on public highways.

Q. And exclusive of accidents to employees?

A. Yes, sir; workmen's compensation takes care of that.

Mr. McConnaughey: I do not believe I ever saw any insurance of that kind.

Mr. Tolles: Would you like to have me bring down one of our building contracts?

Mr. Postle: Nearly all the theatres carry them.

The Witness: Anything where the public would be a factor would have to be considered in this kind of insurance.

[fol. 2155] By Mr. Burr:

Q. You refer to 2 per cent as representing the cost of the general expense item; what does that amount to in dollars, in the appraisal?

A. That represents in dollars, $2,297,328 as shown on page 120 of Williams Exhibit 7-c, and in my judgment is the minimum amount for such an allowance.

Q. The next item which you will please discuss is that of taxes during construction heretofore referred to in your testimony. What has been the method followed by you in computing the taxes?

A. In January, 1924, in connection with the inventory filed by Mr. Williams, there was an item of taxes during

construction in connection with which I testified. On page 121 of Williams Exhibit 7c, this item has been appraised.

The laws of Ohio relative to taxing do not differentiate as between property in the process of construction and property in service; that is to say on tax-listing day, all of the property owned by the company is listed, irrespective of the fact whether it is rendering service to the public or is in the process of construction. Therefore the company does pay taxes on property which is being constructed.

Mr. Postle: Who fixes the valuation?

The Witness: The Tax Commission.

Mr. Dotson: Are you observing, in this testimony, the valuation that was fixed by the Tax Commission as a basis of the value that you are testifying to?

The Witness: I would rather have you withhold that question, Mr. Dotson, until I get through, and then proba-
[fol. 2156] bly I can answer it better.

Mr. Dotson: All right; just strike it out.

The Witness: In reproducing this property as of June 30th, 1925, a logical construction program has been evolved. I have had considerable experience in connection with telephone construction. I have had access to all of our records for a period of 15 years, that is in various companies. I have an idea of how property is constructed, the time consumed in constructing various classes of property, and have taken that experience in consideration in formulating the construction program for the rebuilding or reproduction of this property as of June 30th, 1925.

In reproducing this property I have endeavored to place property constructed into service as quickly as is consistent with the general construction program.

My study in connection with the interest during construction will outline the program that I have set up and will also show the amounts of money by certain periods of a year for construction purposes.

Q. Will that be covered by an exhibit which will be offered in connection with the item of interest during construction?

A. Yes, sir.

Q. Is your computation of taxes during construction based upon that exhibit?

A. It is.

Q. Proceed.

A. Now, during the year 1924 and the year 1925 the telephone company actually paid $1,409,319.18 for personal and real property taxes.

Mr. Leach: Does that include two tax years or one tax [fol. 2157] year?

The Witness: That includes one tax year. We pay in December and June.

Mr. Tolles: Make that clear on the record.

The Witness: The company pays taxes semi-annually, and when I say "Paid in 1924", I mean the semi-annual payment made in December of 1924, and when I say "1925" I refer to the payment made during the first half year of 1925; the sum of the two being the total taxes paid for one year.

Mr. Dotson: That being the year 1924?

The Witness: That is the taxes applicable to the property as of January 1st, 1924.

Mr. Dotson: No.

Mr. Burr: Yes; that is right.

Mr. Tolles: It is the taxes for the year 1924.

The Witness: That is right. I have gone back to the actual taxes paid because in past cases there has always been a question as to whether that is accruals or actual payments, so I have gone back to the records and taken actual payments. Now the taxes that I have just specified apply to the property as of January 1st, 1924.

I have taken Mr. Williams' appraisal of the physical property together with omissions, engineering expense and general expenses testified to by me which gave me a reproduction figure as of June 30, 1925, for those items of property. From my records I secured the new additions for the year 1924 and the first six months of 1925, which were subtracted from the reproduction new just referred [fol. 2158] to, which, in turn, gave me the property as of January 1st, 1924.

Dividing the actual taxes paid by this reproduction new figure as of January 1st, 1924, I obtained a rate or ratio of 1.309.

By Mr. Burr:

Q. As what?

A. As the ratio of taxes paid to the property taxed.

Q. By "ratio" do you mean per cent?

A. Yes, sir.

Q. Proceed. That per cent is as to the reproduction value of the property, is it?

A. I would rather call it a ratio; that is what it is; it is a ratio to the reproduction cost of the property.

Q. Very well; proceed.

A. Having a construction program and knowing the expenditures for construction as will appear in my exhibit in connection with interest during construction, I have applied this ratio of 1.3 to the property under construction and arrived at the amount of taxes during construction which in my judgment inhere in the property if reproduced as of June 30, 1925.

Q. Do you mean by that that you applied it to the property under construction as constructed?

A. Yes; the amount being $1,682,378.

Q. What does that represent?

A. As being the minimum amount of taxes chargeable to construction if the property were to be reproduced as of June 30, 1925. That is shown on page 121 of Williams Exhibit 7-c.

Q. Will you next tell the Commission how you arrived at the item of interest during construction shown in the appraisal?

A. I have prepared an exhibit which sets forth the gen- [fol. 2159] eral structure of the study wherein interest during construction is computed.

Mr. Burr: It may be marked for identification as Schneider Exhibit Number Two, and in order to get it before the Commission and counsel we offer it in evidence now.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit Number 2.

Q. In connection with your exhibit number 2, tell the Commission how you arrived at the item of Interest During Construction.

A. In my testimony a year ago this month, I testified to interest during construction as being a part of the property of this company.

The question of interest during construction involves two main items, one being the amount of money expended for construction; the other being the rate of interest to be charged for such moneys.

To my Exhibit number Two I have attached a blueprint showing the time required to build an exchange and toll plant, and also have indicated how the various classes of plant would be constructed with reference to periods of time.

Q. On what do you base these periods for construction?

A. In order to reproduce the Ohio Bell Telephone Com-
[fol. 2160] pany's property I have made a study in order to determine what in my judgment would be the minimum amount of time required to reproduce such property. I have taken a period of five years which, to say the least, is a minimum and very conservative.

Q. What do you mean by that?

A. I mean by that that it would be possible to increase the construction period probably one or two years more, and still be within reason.

This five-year construction program involves an expenditure of between twenty million dollars and thirty million dollars a year.

There are certain items of property that in my estimation could not be constructed in five years; for instance conduit.

To reproduce the conduit in the City of Cleveland would take considerably longer than I have shown on this diagram because the company would not be able to secure permits rapidly enough to accomplish what I have shown, from the City. It would mean the tearing up of practically every street in the downtown area, and that we know would be an impossible thing.

Mr. Leach: May I ask a question? If you were valuing the property of the Columbus Exchange area as a separate entity, what would your period of duration of construction be?

The Witness: Five years, I think I testified to that before.

Q. What would it be in Dayton?

A. 5 years for Dayton.

[fol. 2161] Mr. McConnaughey: Is that what you used in the Dayton case?

The Witness: Yes, sir; a five-year construction development period, and the same for Columbus.

Mr. McConnaughey: Mr. Burr, will you have him explain what he means by "development" in this connection?

Mr. Burr: Yes; he will go into that.

Mr. McConnaughey: Well, he is using Construction alone, sometimes, and I wondered whether there was anything more than construction involved in this.

By Mr. Burr:

Q. Did you get the import of Mr. McConnaughey's question?

A. I think I can answer Mr. McConnaughey's question when I testify to the cost of establishing business, probably better than now.

Mr. McConnaughey: What I want to know is, what is the application of the word "Development" to this particular exhibit; to what extent is development involved in this study?

The Witness: Not any.

Mr. McConnaughey: Then that should be stricken out of your total, should it not?

The Witness: I don't have anything like that.

Mr. McConnaughey: At the heading of this exhibit it says "Expenditures for Plant Construction During a Construction-Development Period of Five Years." Now is there anything more than the physical construction involved in this exhibit?

The Witness: There is, although I have endeavored to show only the construction activities during this 5-year [fol. 2162] period. There are other activities during the five-year period which are development activities, and those I will cover in my Cost of Establishing Business.

Mr. McConnaughey: Well so far as this exhibit is concerned, however, there are no development features as such, separate from construction, taken into consideration; is that correct?

The Witness: That is correct; only insofar as that the last eight quarters shown on the blueprint diagram involve both construction and development and that is why I have designated the typewritten sheet as covering a construction-development period.

Mr. McConnaughey: You will show to what extent development entered into those eight periods, when you come to it?

The Witness: Yes, sir.

By Mr. Burr:

Q. You say, Mr. Schneider, that your Exhibit Number Two covers only the construction period. The period is five years. Don't you mean by that previous answer that a part of the construction has occurred in what you will hereinafter refer to as the development period?

A. Yes, sir; there are certain classes of plant for which we will have construction that depend on the development of the exchange. Those classes of plant are primarily station equipment and wire.

Q. And they are withheld until the so-called development period for what reason?

A. Because they are of the type of plant which can be [fol. 2163] installed and cut into service most rapidly.

Q. Now will you please refer to the blueprint which is the face sheet of your exhibit number two and tell the Commission first what the numbers 1 to 20 inclusive mean where they appear opposite the line marked "Class of Plant"?

A. Those numbers designate the quarter-year periods or three-month periods in the five-year period of construction.

Q. And what is represented by the white lines shown in the quarterly periods in varying degrees opposite the items numbered from 1 to 23 inclusive and labelled "Land" for the first one, and "Toll Submarine Cable" for the last one?

A. The heavy white line indicates the composite construction activities for all of the exchange and toll property in the State of Ohio in accordance with the logical construction program which I have adopted.

For instance Item 1, "Land", there is a heavy white line in the first quarter-year period which indicates that the company will make expenditures for land during that period.

Those expenditures will occur in all of our larger exchanges such as Cleveland, Toledo, Columbus, Dayton, Akron and several others of our larger exchanges, which will require a construction development period of five years.

In the third quarter-year period we will again purchase land in connection with some of our smaller exchanges.

The same may be said for the quarter-year periods 5, 6, 7, 8 and 10.

It will be noted that in the 20th period there is a full [fol. 2164] white line under the title of "Land". That indicates the lot which would be purchased at that time and represents that parcel in Coshocton which is being held in reserve for a future office building.

The building program would be the next thing to consider. After our purchase of land we would begin to construct our buildings, and that program would be continuous for the first eleven quarters.

After the buildings have been completed, we would then install central office telephone equipment, and that installation would be continuous throughout the first twelve quarters.

The other items of plant have been placed in such a manner and in such a way and at such a time that the property constructed may be cut into service as rapidly as it may.

Q. On what have you based the construction program which is reflected in the blueprint?

A. The construction program in this case is based on the construction program of our largest exchange, which is Cleveland. Our largest exchange program is based on our largest office within an exchange which would be the main office in Cleveland, which would require three years.

Q. Generally speaking how have you arrived at the amounts of plant and property to be acquired and constructed in the several quarterly periods shown in the blueprint?

A. I testified just a short time ago that I have used my knowledge of the general construction methods of the tele- [fol. 2165] phone company; the possibilities of securing an organization to reproduce this property; the amount of work that can be done during a specific period of time, and on the basis of such an analysis I have arrived at the figures for expenditures as indicated on the first four pages of this Exhibit Number Two.

Q. Taking up the remaining seven pages of Exhibit Number 2, explain if you please how you arrived at the amounts shown for the various classes of plant in the respective quarterly periods shown in those pages.

A. The amount shown in the respective quarter-year periods for each class of plant is based on my analysis of the property owned by the company in the various exchanges throughout the state and throughout the toll plant, and is nothing more or less than distribution of the total appraisal as testified to by other witnesses including my appraisal of omissions, engineering, general expenses and taxes during construction.

Now as to land, I have explained how those figures were arrived at by analyzing such exchanges where we owned land and ascertaining the period of time at which it would be necessary for the company to acquire such property.

Now, the buildings will be erected just as soon as plans, specifications and contracts can be let, and I have taken the payments on buildings as being made on the basis of withholding 10 per cent from the contractor; designating a period of time under which the building will be under construction and allowing payments to the contractor on the basis of monthly billing.

[fol. 2166] Exchange central office equipment I have analyzed on the basis of knowing when the buildings were completed and ready for occupancy; knowing the time that is required for drawing up the specifications and placing the order for the equipment.

At the present time the telephone company pays 50 per cent at the date of shipment for all equipment. Sixty days later it pays 25 per cent more. At the date of completion the company pays 20 per cent, and at the date of acceptance it pays the final 5 per cent. That gives me the basis for central office equipment.

Station apparatus, installations, interior block wires, private branch exchanges, booths, and special fittings and exchange aerial wire, are placed in accordance with the acquirement of subscribers, or station growth.

Q. Proceed.

A. I omitted other equipment of central offices. But I might say that that is added after the equipment has been installed and the exchange is ready for operation.

The exchange underground conduit will be installed as soon as we have located our parcels of land and know the type of building that we intend to use.

It is necessary to carry on the underground conduit construction as quickly as possible because the majority of it

is located in congested areas and the work necessarily will be rather slow as compared with work in connection with other classes of plant.

Exchange underground cable will then follow after the [fol. 2167] conduit work has progressed for a period of time and will continue on through six months beyond the end of the conduit program.

Q. Just a moment; why is the conduit distributed over the period of time shown in the Exhibit?

A. I thought I just explained that.

Q. Is it because it would not be possible to open up all the streets at one time?

A. I mentioned that; yes, sir.

Q. Go ahead.

A. Being down in the congested area of our larger exchanges I said that the work would be rather slow. It necessarily follows that the work would then have to be started at an earlier period than would otherwise be necessary.

Q. Proceed.

A. Exchange aerial cable will follow exchange underground cable, and will continue for a period of three months after the underground cable work is completed.

The exchange pole lines will follow the construction of the aerial cable and will continue for probably three months, subsequent to the end of the aerial cable construction.

Mr. McConnaughey: You do not mean to say that the pole line construction will follow the cable construction. Would not the pole line come first? They would run along together, wouldn't they?

The Witness: The two are coincident, yes, sir.

The right of way will be spread over the entire three-year contract period and that involves expenditures for the placing of wires and the placing of poles and the placing [fol. 2168] of cables, the securing of easement from adjacent property owners in connection with our buildings and the securing of permits from the City Authorities for the construction of our underground conduit.

The toll plant will be placed in connection with the exchange properties in such a manner that as soon as an exchange is in position to render local service it also will have toll connections to surrounding and adjacent points.

By Mr. Burr:

Q. Are you referring now to all of the toll items for example shown on the first page of the typewritten exhibit?

A. Yes, sir.

Q. Under numbers 17, 18, 19, 20, 21, 22 and 23?

A. Yes, sir; some of the toll items, for example central office equipment, and underground conduit, will be done simultaneously with the exchange work, because the toll conduit is part of or is a portion of exchange conduit, and toll central office telephone equipment is a portion of the equipment located within our local exchanges.

Having this program of construction, and having the reproduction cost new of the various classes of property, I have set up the expenditures in the first four sheets of this exhibit.

Q. You mean that you have set up the expenditures by quarters as the respective kinds of property would be constructed or acquired?

A. That is correct. On the 5th page of the study I have indicated the amount of plant which would be placed in service through the various quarter-year periods.

Now the percentages as indicated in Column B, are based [fol. 2169] on a study of what exchanges it would be possible to place into service at the end of the second construction period, or in other words in the third quarter-year period.

We have some small exchange properties which it would be possible to construct and start operating at the end of six months.

I have not taken all of these properties, because that would not give me a logical or true reproduction of the entire property.

These smaller exchanges, in the majority of cases, are not paying their way today and it would not seem reasonable for a company in reproducing its entire property, to reproduce all of its non-paying property first.

Q. Before you proceed any further, let me ask you what the relationship is between the blueprint which is the face sheet of the exhibit and the four following pages and the fifth page? I think it is clear to the Commission, but I would like to have you go over it again, if you please.

A. The blueprint is a graphic outlining the expenditures in time. The first four typewritten pages of the study out-

line expenditures of money for the periods of time indicated on the blueprint.

Q. Expenditures of money for what?

A. For plant construction.

Q. In order to do what?

A. To reproduce the property which is now owned by the Ohio Bell Telephone Company.

Q. Now then, what connection is there between the blueprint, the first four pages on the one hand and the 5th [fol. 2170] page on the other?

A. The fifth page indicates such property which has been constructed and which will be cut into service for the various periods of time indicated.

The company will have at the inception or at the beginning of the third quarter-year periods, two classes of property, that is property under construction and property used for rendering service. That property which is used for rendering service will have interest on it, but that will be an operating charge. That property which is still in construction will have interest during construction as a capital charge against it.

Mr. Postle: Mr. Schneider, you said that the smaller exchanges are not paying their way; I believe you said that.

The Witness: That is right.

Mr. Postle: By the smaller ones what do you mean; what number of subscribers? Have you an average on that?

The Witness: Oh we have exchanges anywhere from one hundred up to five thousand and six thousand stations that are not paying their way at the present time. Of course an exchange with six thousand stations could not be built within six months.

I have assumed that the smaller exchanges, 100, 200 or 300 stations, would be built and cut in service inside of three quarters.

Mr. McConnaughey: This plant in service, do you say that that was at the beginning of those three-month periods; that is number three? The third period shows .48 of 1 per cent of the plant in service commencing with the beginning [fol. 2171] of the third quarter period; is that correct?

The Witness: Well that is the average. It would be zero at the beginning and twice that at the end. This is the average.

Mr. Dotson: Twice the zero?

The Witness: In other words, at the end of the quarter there would be .96 of 1 per cent of the plant in service.

Mr. McConnaughey: Then you say that during the third period and thereafter, .48 of 1 per cent of the plant would be in service and out of your calculation of interest during construction?

The Witness: Yes, sir.

Mr. McConnaughey: And so on with the other quarters.

The Witness: I think my next two sheets will explain that.

Mr. McConnaughey: All right.

The Witness: On the fifth page the last column indicated by "C" indicates the amount of exchange and toll plant which would be in service.

On page 6 in order to ascertain the amount of plant for each quarter-year period on which interest during construction is applicable I have found a difference between the cumulative expenditure for exchange and toll property and that amount of property which would be cut into service for these various quarter-year periods. That difference is shown in Column D.

On page 7 under column B I have shown the same figures that appear in Column D of Sheet 6 which represents the [fol. 2172] average amount of plant under construction to which interest during construction is applicable.

Column C indicates the interest computation applying a rate of 1½ per cent per quarter-year period to the amounts of plant in the process of construction as indicated for the various quarter-year periods under Column B.

This computation of interest which, in my judgment, is part of the property owned by the Ohio Bell Telephone Company and would be incurred in reproducing such property as of June 30th, 1925, would amount to $7,481,264, which is the figure shown as the total under Column C on page 7 and is also shown on page 123 of Williams Exhibit 7-c.

And thereupon a recess was taken until 1:30 o'clock P.M. of same day.

[fol. 2173] Afternoon Session

Wednesday, January 27, 1926.

And also WALTER G. SCHNEIDER, resuming the stand for further examination-in-chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Q. Concluding your testimony on the item of interest during construction for the time being, Mr. Schneider, what does the amount of $7,481,264.00 represent?

A. That represents my best judgment as to the amount of property which inheres in The Ohio Bell Telephone Company's plant as of June 30th, 1925.

Q. For what purpose?

A. For the item of interest during construction.

Q. Tell the Commission why there has been a progressive accumulation of the items of omissions, engineering, general expense, taxes during construction, and interest during construction?

A. The omissions are omissions of physical property which were engineered, which engineering required the general expense item for supervision of such engineering. Omissions, engineering and general expense items, as testified to, are part of the property of the Company on which taxes are paid. The interest during construction is the monies paid for construction, and the construction includes [fol. 2174] omissions, engineering, general, and the taxes. I have therefore made all of these overhead construction costs or undistributed construction expenditures cumulative.

Mr. Dotson: What do you mean by cumulative?

The Witness: I mean by cumulative that omissions is computed on physical property taken at 100 per cent.

Engineering is figured at five per cent of the physical property and five per cent of the omissions.

The general expense is computed on 100 per cent physical property on the omissions and on the engineering.

The taxes during construction is taken on 100 per cent of the physical property on the omissions, on the engineering and on the general expense.

The interest during construction is taken on 100 per cent of the physical plant, on the omissions, on the engineering,

on the general expense and on the taxes during construction.

By Mr. Burr:

Q. What other property has The Ohio Bell Telephone Company which is included in the inventory but has not been so far evaluated either by you or by Mr. Williams?

A. Miscellaneous construction expenditures; property which has been engineered, designed and installed but not included in the inventory; working capital, and the cost of establishing the business.

Q. Will you proceed to evaluate those items of property in the order which you have named, postponing, however, your cost of attaching business to a later time, if it should be [fol. 2175] decided to follow that course?

A. On page 124 of Williams Exhibit 7c is the item of working capital. That continues on to page 125.

In my testimony in connection with the inventory a year ago this month I covered in a general way numerous items which must be considered in arriving at the amount of working capital necessary to carry on the business of The Ohio Bell Telephone Company as of June 30th, 1925.

The working capital, as I have considered it, consists of two major elements, working cash and materials and supplies.

The cash is the amount of money which is necessary in order that the company may pay its bills promptly, pay them at such time that they may take advantage of discounts, if any are available. It must have sufficient cash to take care of its operating expenses while service is being rendered.

As shown on page 124 of Williams Exhibit 7c consideration should be given to the factors providing funds equal to five or six weeks of expenses in connection with furnishing exchange service.

They must be able to have sufficient cash to provide for expenses incident to furnishing measured service, and they must have sufficient cash on hand to provide for expenses incident to the giving of long distance service.

The Company must maintain at all times a reasonable balance in the various banks throughout the State of Ohio. They must have a sufficient amount of funds on hand to [fol. 2176] provide for the traveling expenses of its em-

ployes and it should have sufficient cash on hand to provide for the many contingencies which arise from time to time throughout its business.

It must have materials and supplies on hand sufficient in amount to permit of making repairs when found necessary; to permit of providing for contingencies such as sleet storms, severe wind storms, floods and like contingencies.

Q. These supplies which you speak of as being carried by the Company, are they supplies which it carries in addition to the supplies carried for it by The Western Electric Company?

A. Yes, sir. The supplies that I consider in this item of working capital are the supplies owned and paid for by The Ohio Bell Telephone Company.

Owing to the large number of different items of plant and appurtenances it is necessary that the Company carry a large number of items of supplies.

Practically every unit of property which we operate is subject to wear, tear, rust, rot and decay, and there are certain parts of completed structures which from time to time are replaced through maintenance, and it is necessary that our supplies contain those elements for making such replacements and repairs.

The amount of working capital and supplies which, in my judgment, is necessary for the Company to have is five per cent of the reproduction cost new of the physical plant less the general equipment; this amount, as indicated on page [fol. 2177] 125 of Williams Exhibit 7c, being $6,350,000.00.

This allowance of five per cent in my judgment is proper, and it is also one which The Public Utilities Commission of Ohio have been using in connection with the various cases which this Company has had before it.

Mr. Dotson: I rather think that the latter statement should be stricken out referring to the rate used by the Commission heretofore. That is matter of record and concerning which we are not supposed to know anything, and not pertaining to know anything about, and it will speak for itself, and it is not in the case any way. It is testimony based on an entirely different proposition.

Mr. McConnaughey: It seems to me the whole statement should be stricken out for the reason that he has named eight or ten items here, every one of which is capable of exact calculation, and finally he says that the amount that

should be allowed should be an amount in his judgment of five per cent. It is possible to determine what is necessary for this Company to have for five or six weeks operation, etc., through all these items, from their records and from their past experience.

Chairman Marshall: I think that part may remain. The last part may be stricken out. That is argument.

Mr. Burr: By "the last part" does the Commission mean the reference to the amount customarily allowed by the Commission for the item?

Chairman Marshall: Yes, sir.

Mr. Burr: All right; note an exception.

[fol. 2178] Q. What is the next item which you referred to in answer to my previous question relative to property included in the inventory but not so far evaluated?

A. Miscellaneous construction expenditures.

Q. That, I believe, is an item as to which the Commission have heretofore excluded testimony, but in order to make the record I will ask you to evaluate the item, if you please.

Mr. McConnaughey: We object.

Chairman Marshall: I did not catch the full question. What is the question?

(Question read.)

Mr. McConnaughey: That was the radio equipment, if I remember it.

The Witness: It is just a little bit more than the radio equipment and I would like to tell, if I may, what else is included in that.

Mr. Burr: It is a small item and my suggestion would be that Mr. Schneider's testimony, which will be very brief, be taken subject to the objection.

Mr. McConnaughey: That is satisfactory.

The Witness: This equipment today probably is small in amount, but it involves a class of equipment which will in the course of time become of considerable magnitude with any telephone company's property because of the relationship of radio and its development with the telephone business.

This item at the present time contains loud speaker and [fol. 2179] radio broadcasting equipment. It also contains a

public address system equipment and deaf set equipment. The American Telegraph & Telephone Company have developed what they call deaf sets, or equipment to be used by people who are hard of hearing. This equipment is attached to the standard telephone equipment which we instal in the subscriber's premises, and for which we receive revenue. I think the charge is now five dollars a month for those sets.

We also have this public address system, which is a system of loud speakers used in connection with various kinds of broadcasting.

The last National Defense Day, which was broadcast and which was in charge of the United States Government, made use of this public address system in a large number of towns located throughout the United States wherein the Associated Companies operated exchanges.

This loud speaker equipment was not paid for by anybody but was donated by the Bell Associated Companies.

Now it seems to me that this general use of public address systems and the development of the deaf sets, and other things which we know are now in the process of development and research, are so closely related to the telephone industry, or the transmission of communication by means of wire, that the miscellaneous construction expenditures which this Company will from time to time experience should become a part of this property which is used and useful in the rendering of telephone service.

Mr. Dotson: When you speak of this equipment being [fol. 2180] donated by the Bell Associated Companies, you mean by The A. T. & T. Company, do you not?

The Witness: No, sir. By the Associated Companies.

Mr. Dotson: How do they operate in reference to the manufacture and production and furnishing of that kind of equipment?

The Witness: The developing and research work is done by the Developing and Research Department of the Bell Telephone laboratories.

Mr. Dotson: Where are they?

The Witness: The laboratories are located in New York City.

Mr. Dotson: Well, those are the laboratories of the A. T. & T. Company?

The Witness: Well, the laboratory company is owned by the A. T. & T. Company, yes, sir.

Mr. Dotson: Well, that is what we have known as the A. T. & T. Company laboratories that furnish this service under the 4½ per cent contract?

The Witness: They have furnished the development and research work in connection——

Mr. Dotson: Those are the laboratories you are speaking of in connection with this equipment?

The Witness: Yes, sir. Now the Western Electric Company manufactures that equipment and the Associated——

Mr. Dotson: For whom?

The Witness: For whomsoever wishes to buy it.

[fol. 2181] Mr. Burr: Who owns it?

The Witness: The Ohio Bell Telephone Company owns this broadcasting equipment.

Mr. Dotson: It hasn't furnished it at Washington?

The Witness: It was furnished in the State of Ohio for the use of the Government. It had been requested in the State of Ohio.

Mr. Dotson: It was The Ohio Bell Telephone Company then that furnished that equipment you are testifying about?

The Witness: I do not quite understand?

Mr. Dotson: Do you mean to say it was The Ohio Bell Telephone Company that furnished the equipment for the public speeches or addresses that was used on Defense Day?

The Witness: This last National Defense Day The Ohio Bell Telephone Company was not requested to broadcast the particular—or to broadcast to the public the items which were broadcast by the various broadcasting stations. But other Associated Companies throughout the United States did give the service of their public address system free of charge in connection with the National Defense Day. We had the equipment in the State of Ohio but was not requested to use it, although it was available.

Mr. Dotson: But what I had in mind was this, that I assume from your testimony that you are speaking about the equipment that was used at Washington, where the center of the activities were that day, which resulted in this general broadcasting; it emanated from Washington, did it not?

[fol. 2182] The Witness: It emanated from various points. The officers of the Government were located in Washington

but I think that the broadcasting station of The American Telephone & Telegraph Company in New York City carried on the work.

Mr. Dotson: And then The Ohio Bell Telephone Company, the Indiana Bell and the Michigan Bell and all the other Associated Companies picked it up with their equipment at different points in Ohio and broadcast it?

The Witness: That is true, and the public was not charged a cent for it.

Mr. Dotson: Your testimony at the present time relates to the equipment that was used in Ohio by The Ohio Bell Telephone Company?

The Witness: The equipment that is owned by The Ohio Bell Telephone Company and is available for that use.

Mr. McConnaughey: Is there any rate for that service involved in this case? Is the Company expecting a rate to be fixed in this case to cover that service?

The Witness: No; I do not think the Company is asking for a rate for the use of that equipment other than we are charging I think it is $5.00 a month for deaf sets.

Mr. Dotson: Well, you are seeking to have the Commission though include the value of all that equipment in this general rate that is to be made for the use of local telephone service?

The Witness: I think that that is perfectly proper. I think the general public will receive the benefit of this equip-
[fol. 2183] ment and I think the subscribers should be perfectly willing to pay for it.

Mr. Dotson: Well, your answer is "yes" then?

The Witness: Yes, sir.

Mr. Dotson: Then in connection with this valuation of this equipment would you also include the expense of operating the equipment when used?

The witness: Most assuredly.

By Mr. Burr:

Q. What, in your judgment, is the reproduction cost new as of June 30th, 1925, of that equipment?

A. $12,805.00.

Q. What is the next item in your list?

Mr. Dotson: That of course is also subject to the objection.

Commissioner Poor: There has been a new feature brought out, and that is those deaf sets. The valuation of those deaf sets probably should be allowed in.

Mr. Dotson: Well, we want more testimony on that, Yours Honors, it seems to me.

Commissioner Poor: That is subject to cross-examination. As the record now stands the Commission has said they would not allow in the valuation any of this miscellaneous. Now we are going into this to see what this miscellaneous item consists of. It was brought out for the first time, to my knowledge, that these deaf sets are in here. We do not want to exclude the whole thing if the deaf sets are included in a part of the local system.

Mr. McConnaughey: It can all be straightened out in con- [fol. 2184] nection with fixing the base and the rate.

Mr. Dotson: But my position is, even on that item we are not prepared to admit anything because there is no testimony on that item except incidentally it is mentioned. There is nothing in the testimony to show what the value of that item may be.

Commissioner Maullar: That is, there is no separate valuation of it here?

Mr. Dotson: No, sir, no separate valuation of the deaf sets.

Commissioner Poor: I do not want our ruling to be so broad as to shut the doors against them putting in the valuation of the deaf sets.

Mr. Dotson: Well, I assume your ruling at this time would not be a complete barring out of that testimony. It would be barring this testimony from having any material bearing of value until they come in with testimony that would be directed to that point.

Mr. McConnaughey: I think the remark that led to this particular discussion by Mr. Dotson was simply that all of this testimony is understood to be subject to the objection.

Mr. Dotson: Yes, that is all I meant by this last remark.

By Mr. Burr:

Q. What about the speech in-put portion of the equipment under discussion?

A. That consists of equipment which is moved from place to place, usually installed in some subscriber's [fol. 2185] premises; at the present time usually in restau-

rants or places of amusement; and is used as the in-put for broadcasting stations. That is, in other words, a remote point will furnish the entertainment which is carried to the broadcasting station by means of leased or rented wires and then broadcast over the broadcasting station's antennae and broadcasting system.

Q. Is the speech in-put apparatus a part of the property of the Company used in voice transmission over the telephone wires?

A. Yes, sir.

Q. All right, I think that is enough on that.

(No reply.)

Mr. Leach: Mr. Schneider, may I ask you a question?

The Witness: Yes, sir.

Mr. Leach: What is the reproduction value, as you have it, of the deaf sets as distinguished from the other paraphernalia you have mentioned in that connection?

The Witness: I have no figure with me, Mr. Leach, on the cost of these deaf seats, but it is considerable. It is an outfit containing——

Mr. Leach: Well, I just wanted the item separated from the other, but if you haven't it, why, all right.

The Witness: Well, I haven't it with me, no.

By Mr. Burr:

Q. Now may I proceed? What is the next item of property in the list which you mentioned at the opening of this afternoon's testimony?

A. That is plant and equipment which has been designed and installed but not included in the inventory, sometimes [fol. 2186] called construction work in progress.

Q. How have you evaluated that item?

A. By taking the amounts shown on the books of the Company and subtracting the interest during construction which is contained in that item.

Mr. McConnaughey: Is this non-operating property that he is talking about now?

Mr. Burr: Property not yet cut into service, but installed for the purpose.

The Witness: Now the telephone business is somewhat different from the ordinary industrial concern, insofar as

they are always constructing new property. We always have in the course of erection or construction a considerable amount of property to not only provide for service which we expect will be required in the immediate future, but it is also incurred incident to reconstructing, rebuilding and rehabilitating our plants.

The ordinary industrial concern, in enlarging, will have this construction work in progress at some one particular time and then it will disappear from their books. The Ohio Bell Telephone Company has at all times a considerable amount of work which has been planned and installed but not in the process of giving service.

Now, as of June 30th, 1925, there was $2,237,718.00 worth of this property.

Q. Where?

A. In the State of Ohio, owned and paid for by The Ohio Bell Telephone Company.

Q. And what kind of cost are you taking into considera-
[fol. 2187] tion in fixing that amount?

A. Those are current costs.

Q. Well, is it an actual cost to the Company?

A. Yes, sir; they are actual costs, but they have been incurred right at or around June 30th, 1925.

Mr. Dotson: Do you mean you have taken this sum from the books of the Company?

The Witness: Yes, sir.

Mr. Dotson: Actual expense account?

The Witness: Yes, sir; I have some detail of that if you would like to have it.

Mr. Dotson: Is that less the interest during construction?

The Witness: Yes, sir.

Mr. McConnaughey: I think we should have the detail of that. He says he has the detail.

Mr. Burr: Let him give it.

Mr. Dotson: And this is not based on any unit cost?

The Witness: No, sir. The amount for exchange pole lines is $51,100.00.

The amount for exchange aerial cable was $157,000 plus.

Exchange aerial wire was $4800.00 plus.

Exchange drop wires $8700.00 plus.

Exchange underground conduit, main, $92,100 plus.

Exchange underground conduit, subsidiary, $9600 plus.

Exchange underground cable, main, $170,800.00 plus.
[fol. 2188] Exchange Underground cable, subsidiary, $25,-600.00.

Central office telephone equipment, manual type, $687,-700.00.

Central office telephone equipment, step by step type, $654,300.00.

Other equipment of central offices, $1100.00.

Station apparatus, non-dial type, $1200.00.

Private branch exchanges, $22,500.00.

Buildings, $247,000.00.

Toll pole lines, $7400.00.

Toll aerial cable, $7300.00.

Toll underground conduit, $1100.00.

Toll underground main cable, $9600.00.

Then there are a few minor items such as exchange house cable, right of way, toll aerial wire, and toll underground subsidiary cable.

Now I have that further subdivided as between amounts for some of our exchanges, if you would like to have that.

Mr. Postle: Have you the amount of interest deducted during construction?

The Witness: Yes, sir.

Mr. Postle: How much?

The Witness: I haven't got it because it has been deducted.

Mr. Burr: I think that question will be answered in just a minute, Mrs. Postle.

Mr. Dotson: Do you mean now to allocate the various [fol. 2189] amounts to different exchanges?

The Witness: Some of the larger activities I have here.

Mr. Hagelbarger: Is the Akron Exchange included?

The Witness: Yes, sir, I have Akron.

I have for Cleveland, $610,000.00.

For Columbus, $1,050,000.00.

For Akron, $91,600.00.

For Canton, $87,600.00.

For Toledo, $184,500.00.

For the toll property, $84,300.00.

Some of the smaller exchanges, we have $10,400.00 for Alliance; $28,900.00 for Lisbon; $11,300.00 for Ravenna.

I think that probably covers the——

Mr. Harshman: How much for Dayton?

The Witness: Well, Dayton has been pretty well cleaned up. We have $4600.00, is all we have for Dayton right now.

Mr. Burr: Is that sufficient information on that subject?

Mr. McConnaughey: Let me ask, what do these figures represent; the amount that had been expended up to date on these varions projects?

The Witness: That is correct.

By Mr. Burr:

Q. Tell the Commission whether or not that two million and odd dollars represented by the construction work in [fol. 2190] progress is claimed for in any other part of the Company's appraisal, if you know?

A. It is not; nor is the interest during construction incident to the work as of this date included.

Q. The last of your answer is, I think, the question in which Mr. Postle, of counsel, was interested.

Mr. Postle: The amount of interest deducted.

The Witness: I don't know how much has been excluded. It has all been excluded; I can get that figure for you.

Mr. Burr: Would Mr. Postle like to have that?

Mr. Postle: Yes, I think we should have that.

Mr. McConnaughey: That figure differs somewhat from the figure on Williams Exhibit No. 9.

The Witness: On page 127 of Williams Exhibit 7c we have $2,223,718.00.

Mr. McConnaughey: You gave a different figure. What is the figure you gave just now?

The Witness: The figure on page 127——

Mr. McConnaughey: No, I mean awhile ago.

The Witness: The figure I intended to give was $2,223,718.00.

Mr. McConnaughey: I don't think that is what you read.

Mr. Burr: I think the figure you gave was $2,237,718.00. which is correct?

The Witness: $2,223,718.00.

By Mr. Burr:

Q. With respect to the appraisal of the physical property [fol. 2191] of the Company, Mr. Schneider, what familiarity, if any, have you, and have you had during the past few years, with unit costs including the costs of labor and material

entering into the construction or reproduction of property such as that of The Ohio Bell Telephone Company?

A. Well, I have had access to all the actual costs incurred by The Ohio Bell Telephone Company since its incorporation in 1921. Prior to that time I have had access to and have used the actual construction experiences of The Central Union Telephone Company, and in connection with my work as appraisal engineer of the Ohio Division of The Central Union Telephone Company I have had access to independent companies' experiences with respect to construction costs.

Q. When you say you have had access to those costs, do you mean that you have not only had access to but that you have made use of them?

A. Yes, sir.

Q. In some parts of your answer you said you had access to and in some places you said you had access to and had used?

A. Well, wherever I had access to, I used.

Q. What if any telephone cost records have you in your office?

A. We have cost records covering all the completed work which The Ohio Bell Telephone Company has done since its incorporation.

Q. Do you know the costs of telephone construction including labor and material costs current as of June 30th, 1925, for the State of Ohio, and particularly with respect to The Ohio Bell Telephone Company?

[fol. 2192] A. Yes, sir.

Q. Stated in dollars, what amount of telephone property have you evaluated within the past ten years?

A. Well, now, I cannot give it for the past ten years but I can give it as long I have been in the telephone business.

Q. Very well; that will do.

A. Three hundred million dollars.

Q. In connection with the appraisal of the property of The Ohio Bell Telephone Company, what, if anything, did you do, and particularly with respect to the so-called 1925 inventory offered in evidence by Mr. Williams?

A. I made an independent appraisal of The Ohio Bell Telephone Company's property as of June 30th, 1925, using Mr. Williams' inventory as a basis.

Q. With what result?

A. I have found what, in my judgment is the reproduction cost new of The Ohio Bell Telephone Company's property as of June 30th, 1925, excluding appraisal overheads or undistributed construction costs and general equipment.

Q. Does it include construction work in progress?

A. No, sir.

Q. Does it include miscellaneous construction expenditures?

A. No, sir.

Q. Or the cost of establishing business?

A. No, sir.

Q. Very well; exclusive of all those items, what is the answer?

A. And excluding working capital.

[fol. 2193] Q. Very well.

A. $108,050,000.00.

Q. To what extent did you arrive at your judgment independently of Mr. Williams, if you did arrive at it in that way?

A. My appraisal is based on an analysis of the Company's experiences in connection with the construction of its property during the past few years.

I have adopted the Real Estate Boards' appraisal as testified to by Mr. Williams——

Q. That is for the item of land?

A. For the item of land, yes; and I have adopted Mr. Myers' figure relative to the appraisal of buildings.

That I think in general tells how I got at my figures.

Q. In other words, with the exception of land and buildings and the items specifically named as having been excluded, you arrived at the amount of $108,050,000.00 by taking into consideration the costs incurred by The Ohio Bell Telephone Company during the past few years?

A. Yes, sir.

Q. Now that amount of $108,050,000.00 compares with what amount shown in Mr. Williams' appraisal?

A. $107,251,561.00.

Q. In order to shorten the examination on this point as much as possible, let me ask you whether or not you will be able to show the Commission's engineers the method by which you arrived at this valuation, without our going into it here in the record?

A. Yes; I will be glad to go over the figures with any

[fol. 2194] one that might be authorized to take up the question.

Q. Directing your attention next to the item of right of way, as to which you made a separate study in the toll case, do you recall what your study showed as to the cost of toll right of way reduced to a cost per pole basis?

A. In the toll appraisal which I testified to I made an allowance for right of way, which was three per cent of the outside distributing system. This allowance that I made, divided by the total number of poles in the toll property, gave a figure of approximately $1.50 per pole, although that was not the way right of way was arrived at.

Q. Of $1.50 per pole?

A. Approximately $1.50 per pole.

Q. What did your studies show with respect to the cost of toll right of way on a per pole basis?

A. Such studies that I have made since of the actual costs leads me to believe, and it is my judgment, that it would cost at least $4.00 to $5.00 per pole to reproduce the right of way in connection with our toll property.

Q. In the case of exchange right of way, is the acquisition of it more or less complicated and difficult than is the case of toll right of way?

A. The acquisition of exchange right of way is more difficult.

Q. Is it more expensive or less expensive?

A. It is more expensive when considered in the light of expenses of the company in obtaining it. It is less expensive probably in considering the amounts paid to others for these privileges.

[fol. 2195] Q. But on a per pole basis is the cost of acquiring the exchange right of way more or less than that of acquiring toll right of way?

A. In my judgment it is a little bit less.

Q. And how much less?

A. Around 50 cents to 75 cents probably.

Q. What are some of the items which increase the cost of securing the exchange right of way over the toll right of way?

A. In securing exchange rights of way the Company will spend more money as salaries and wages of its employes than it would in the toll. This would be on account of the fact that in cities, usually consent is what the Com-

pany is after, rather than payment for right of way. For instance, we must necessarily see property owners for the placing of poles, for the stringing of wire across their property, for the attachment of cables on buildings, etc.

Q. You are speaking of exchange right of way?

A. Yes, sir.

Q. Go ahead.

A. We must secure permission from owners to trim trees and in many cases it is necessary for us to secure permission to occupy rear lot rights where no alleys are available for distribution purposes.

Now in securing exchange rights of way it is usually common practice to just obtain the consent, no payment being involved, because practically—for a large number of people whom we seek rights from are also subscribers to the service, and as a result their permission is secured without any payment for rights.

[fol. 2196] Q. To what extent must pole permits and excavation permits be obtained from cities?

A. Wherever the Company desires to place poles or to excavate for the purpose of installing underground conduits, it is necessary that the plans and locations of these activities be presented to the proper city authorities and their consent received. Besides getting the city's consent for the placing of poles it is also necessary to receive the consent of the property owner on which property the pole is supposed to be located, or adjacent to which property the pole is to be located.

Q. Based on your investigation, what have you to say as to the allowance of three per cent for the item of right of way?

A. Well, in the light of recent occurrences in the State of Ohio relative to right of way, it is my judgment that three per cent should be the absolute minimum for exchange right of way, and is not applicable at all to toll right of way.

Q. Why not?

A. It should be considerably in excess of three per cent for toll.

Q. To what developments do you refer?

A. I refer to the ruling handed down by the Supreme Court of the State of Ohio in the Watson case and to several cases which are now in the hands of our attorneys rela-

tive to suits for damages which are being brought against the Company for the location of poles on the premises of owners of property.

Mr. McConnaughey: Is that what raises the price from $1.50 to $4.00 or $5.00 that you spoke of a moment ago?

[fol. 2197] The Witness: That is one of the reasons why, in my judgment, right of way should be considerably higher.

Mr. Tolles: I think another witness will also touch on this most important question at a little later point in the hearing.

The Witness: I might also explain why the toll right of way, taking it on the pole basis, should cost more than the exchange.

In the rural communities and out in the country when we are out securing rights for toll poles, that does not involve any service to any particular subscriber; as a result the various owners of property adjacent to highways are reluctant to give permission without the payment of some sum for that right, and as a result the payments which we make, plus the expenses of our right of way people and agents, would bring the cost of right of way on a per pole basis considerably in excess of that to which we have testified heretofore.

Mr. Leach: Mr. Schneider, do you have the figures on the amount you have actually paid property owners for right of way, say in the last five years, or one year?

The Witness: I have some figures in Cleveland relative to rights of way which were secured within the last year, and I think we can get some more for you.

Mr. Leach: Well, you were basing your costs generally on the experiences of the Company as to costs on other things; I was wondering if you were basing this percentage also on actual costs?

[fol. 2198] The Witness: Well, the three per cent, Mr. Williams has testified to. Now I have testified to what I believe and what, in my judgment, would be the proper amount for right of way, and I am basing that on recent costs of right of way experienced by the Company.

Mr. McConnaughey: What do you value right of way at in your figure of $108,050,000.00; on what basis?

The Witness: At $3.25 per pole.

Mr. Leach: For toll lines or all poles?

The Witness: That is for the total account, 207, Right of Way.

Mr. Leach: You gave a figure per pole; is that all poles or toll poles?

The Witness: All poles.

Mr. McConnaughey: And what is the total figure?

The Witness: $2,130,000.00.

Mr. Burr: Are there any further questions? If not, Mr. Schneider may stand aside with the understanding that the item of the cost of establishing business referred to by him will be covered by him at a later point in the hearing.

Mr. Dotson: Just one question before you do that.

Mr. Schneider, to what extent have you based your testimony just given on the cost per pole of right of way on the testimony of Mr. Williams heretofore on the same subject?

The Witness: I did not base my testimony on Mr. Williams' testimony at all.

[fol. 2199] Mr. Dotson: You have made up your statement and your testimony from an entirely independent source?

The Witness: Oh, yes. I arrived at this figure before Mr. Williams had any appraisal prepared.

Mr. Dotson: What was the nature of the source from which you derived this result?

The Witness: For right of way?

Mr. Dotson: Yes.

The Witness: I took into consideration the allowances which we have been claiming heretofore, the allowances which the Commission have been giving, and my investigation of right of way costs which the Company has actually incurred within the past year or year and a half.

Mr. Dotson: This actual cost in the last year or year and a half, in what part of the State or in what particular exchanges?

The Witness: Throughout the State of Ohio, generally, and particularly in and about the rural communities in Cuyahoga County and the locality. I think this Watson case was down around Akron, wasn't it, Mr. Tolles?

Mr. Tolles: Trumbull County; Warren.

Mr. Dotson: Does the nature of the soil with reference

to limestone deposits, or any other hard substance which you find in the soil, affect the cost per pole in this respect; have they such conditions in Cuyahoga County and northeastern Ohio?

The Witness: That would affect the cost of setting the pole, but I do not think it would affect the cost of right [fol. 2200] of way, unless it might have some effect on the growth of trees, or something of that character, which might line the right of way and have to be trimmed.

Mr. Dotson: Well, I was just comprehending a little more than I should in that question probably.

Mr. Burr: If there are no more questions to ask of Mr. Schneider now, he may stand aside, and, although it is a little out of our intended program, we would like to call Major Hirsch today on account of other engagements which he has.

Major Hirsch may take the stand.

[fol. 2201] And also GUSTAV HIRSCH, called as a witness on behalf of The Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. State your name to the Commission?
A. Gustav Hirsch.
Q. Have you been sworn?
A. Yes, sir.
Q. Where do you live, Mr. Hirsch?
A. Columbus, Ohio.
Q. Where were you educated?
A. Ohio State University and the public schools of Columbus.
Q. What studies did you pursue at the Ohio State University?
A. I hold a degree of Mechanical Engineer in Electrical Engineering.
Q. After your graduation from the University, what did you do?
A. I worked for The Cleveland Electric Illuminating Company until the time of the Spanish American War.

During the Spanish American War I was Lieutenant in the United States Signal Corps and had charge of the lines of communication of the 7th Army Corps.

Q. Following your service in the Spanish American War, what did you do?

A. I entered the employ of The Columbus Citizens Telephone Company as draftsman; then became chief draftsman, assistant engineer and chief engineer during the [fol. 2202] original construction of that property in Columbus.

From there I went to Detroit as chief engineer in charge of The Peoples Telephone Company of Detroit and Jackson.

Since that time I have built, engineered, constructed, operated and maintained telephone properties throughout different sections of the United States, except during the period of the World War, when, as a Major and Lieutenant Colonel of the United States Signal Corps, I had charge of the lines of communication of the 83rd Division, the 7th Division and 36th Division, United States Army.

Since my return from Army service I have acted as consulting engineer and chief engineer of various telephone properties throughout the State of Ohio, and at the present time am engaged as consulting engineer in the general practice of, primarily, telephone engineering.

Q. Name some of the companies which you serve in the State of Ohio in an engineering capacity?

A. At the present time I am the engineer of The Lima Telephone & Telegraph Company, The Mansfield Telephone Company, The Conneaut Telephone Company, the local Telephone Company, The Galion Telephone Company, The Crestline Telephone Company, The Lorain County Telephone Company, The Napoleon Telephone Company, The Ada Telephone Company, The United Telephone Company of Bellefontaine, The Athens County Telephone Company, The Bergholz Telephone Company and The Minerva Telephone Company.

Q. How many stations are represented by those com- [fol. 2203] panies, if you know?

A. All of those companies?

Q. Yes; and your answer need only be approximate.

A. I do not know offhand.

Q. Well, the number would run into thousands, would it?

A. Yes, sir.

Q. In connection with the engineering work which you do for those companies, do you have occasion to study the costs to those companies of different classes or parts of their business?

A. My work covers all kinds of telephone engineering, including cost studies covering different portions of telephone plant and operation.

Q. Have you made a study of the annual carrying charges on receivers, transmitters and induction coils in telephone sub-sets used and owned by independent telephone companies in Ohio in excess of the annual carrying charges for similar sets, if leased or licensed to such companies?

A. I did.

Q. Look at the compilation consisting of five sheets and a cover, and which may be marked for identification as Hirsch Exhibit No. 1, and tell the Commission whether or not that exhibit shows the results of your study?

A. This exhibit does show the result of the study made on four telephone properties within the State of Ohio, independent companies, non-Bell, operating 38,000 plus telephones connected load.

Mr. Burr: The exhibit is offered in evidence as Hirsch Exhibit No. 1.

[fol. 2204] Q. What are the names of the companies whose experience you used in the preparation of the exhibit?

A. The Lima Telephone & Telegraph Company, of Lima, Ohio; The Marion County Telephone Company, of Marion, Ohio; The Mansfield Telephone Company, of Mansfield, Ohio; and the Warren & Niles Telephone Company, of Warren, Ohio.

Q. Why did you choose those companies?

A. I chose those companies because they are comparatively large independent telephone companies in this State using different types of sub-sets.

Mr. McConnaughey: How do these sub-sets compare with those used by The Ohio Bell Telephone Company?

The Witness: There are certain sub-sets here in some of

these companies made by The Western Electric company; not the sub-set that is sold or rented on a leased basis. The other sub-sets are made by independent manufacturers, non-Bell.

Mr. McConnaughey: Well, we don't believe that this evidence is of any value unless it is based on substantially the same equipment. We object to it for that reason.

Mr. Tolles: We get better equipment at cheaper cost.

Chairman Marshall: How can you prove that by this analysis?

Mr. Tolles: We understand that this is an interpolation of evidence bearing on the 4½ per cent contract. There is a question of what is a proper allowance per year for the leased instruments. Now the experience of cost to com-
[fol. 2205] panies who purchase and maintain their own instruments would, it seems, throw much light on that question.

Mr. McConnaughey: Do you propose to show what part of the 4½ per cent cost goes to the maintenance of the equipment?

Mr. Tolles: I think we always do.

Mr. Burr: It is already in the record in this case in the testimony of both Mr. Rhodes and Mr. Kozitsky, taken in the Bell rate case, and there the value of the instrument service under the License Contract has been shown; it has been evaluated. And it is our purpose here to show what the experience of other companies, other than The Ohio Bell Telephone Company, is in that respect.

Mr. McConnaughey: Of course it tempts other people who are interested in this proposition to compare costs of independent companies in other directions, and we have a wide field opened to us. The thing the Commission is trying to determine is what it costs The Ohio Bell Telephone Company to render service, as I understand it, and that is the only thing we are concerned about.

Mr. Burr: Yes, but the Commission are interested in knowing what it would cost The Ohio Bell Telephone Company to own the instruments and whether they would be instruments of Western Electric manufacture, or, if they would not have the advantages of the Western Electric contract, instruments of an independent manufacture as against the cost under its present situation.

Mr. Tolles: I suppose you will at some point in the pro-

[fol. 2206] ceedings undertake to consider the reasonableness of the 4½ per cent contract and the question whether under that contract it is more advantageous to lease instruments than it would be to purchase them in the open market and maintain them ourselves.

Now the point here is to show what the cost of the purchase and maintenance of instruments is and the ownership of them to telephone companies.

Commissioner Poor: I understood Mr. Hirsch to say that the instruments used as the basis for his calculation were not the kind of instruments as are to be used by The Ohio Bell Telephone Company.

Mr. Tolles: They are not made by the same people. They are all receivers and transmitters and all instruments used in the operation of the telephone business. Now we happen to lease a particular kind, that is The Western Electric Company, and they are attributed a place in the 4½ per cent contract as being worth per year 97 cents per station, or something like that—91 cents.

Now what it would cost us to go out and buy, own and operate and maintain machines ourselves—in other words, are we doing a reasonable thing? It seems to me it is entirely competent on that feature.

Commissioner Poor: It would be competent if you were going out and showing what it would cost you to own and operate the particular kinds of instruments that you do operate, but I don't see how it would help us very much to show what it would cost to operate something different.

[fol. 2207] Mr. Tolles: Well, there cannot be any great difference between one telephone receiver and another receiver that some different people may make.

By Mr. Burr:

Q. What is true with respect to that, Major Hirsch?

A. What is the question?

Q. What difference is there between the instruments, the sub-sets, which you have studied in making your study, and those in use by The Ohio Bell Telephone Company, speaking generally?

A. There is no difference.

Mr. Leach: May I ask a question at this point of Mr. Burr or Mr. Tolles; whether or not in the showing of this cost of

telephone receivers, transmitters and induction coils as part of the 4½ per cent contract they also propose to show the remaining cost that enters into the 4½ per cent contract over and above the receivers, transmitters and induction coils?

Mr. Tolles: That seems not hardly to be material to this question, but nevertheless I suppose they always make that proof.

Mr. Burr: We did not and have not in our previous testimony undertaken to show the cost to the American Company of furnishing the receivers, transmitters and induction coils. We have shown the cost of those sets to outside purchasers and we have evaluated the value of the instrument service to The Ohio Bell Telephone Company on the basis of what it would have cost that Company per year per set if it had owned the instrument itself.

[fol. 2208] Mr. Leach: That goes to the receivers, transmitters and induction coils?

Mr. Burr: Yes.

Mr. Leach: Now I am asking whether you also propose to show the cost——

Mr. Tolles: We do not propose to show the cost to the A. T. & T. Company. We propose to show the value of the service to The Ohio Bell Telephone Company.

Mr. Leach: Well, you answer my question then in the negative?

Chairman Marshall: Do we understand Mr. Hirsch to answer Mr. Poor's question that there is no difference in the cost of the instrument or no difference in the instrument?

The Witness: No difference in the instrument; that is, these component parts of a sub-set.

Commissioner Maullar: Do you think the Western Electric Company would agree with you on that?

Mr. Burr: There is no difference except in the code numbers.

The Witness: I have made many tests of transmitters, receivers and induction coils and the set complete and satisfied my own mind that I would not give thirty cents difference between a set made by the Western Electric Company over sets made by the independent manufacturers studied in that particular case.

Commissioner Poor: Why don't the Company attempt to show the cost or the value of this service by showing what

[fol. 2209] it costs some company using the same kind of equipment as The Ohio Bell Telephone Company and which is not getting their equipment by reason of the 4½ per cent contract?

Mr. Burr: Some is the same.

Commissioner Poor: That is what I based my first question, was that they were not the same.

Mr. Tolles: The point is simply this; our witnesses have testified that the value of the leasing which we get under the 4½ per cent contract was some figure—97 cents a station, or something like that; we are simply undertaking to show that that is a reasonable estimate, because if we bought them and maintained them ourselves it would cost that much or more; that is all.

Mr. McConnaughey: Of course they are proving that by showing the experience of people who buy elsewhere and of different people, without the benefit of the Western Electric contract and all that sort of thing.

Commissioner Poor: Supposing the Western Electric Company furnished The Ohio Bell Telephone Company a Pierce Arrow automobile and you attempt to show the value of the service rendered by that Pierce Arrow automobile by showing what the value of some other company using Fords——

Mr. Tolles: Oh, that cannot be a comparison.

Commissioner Poor: It might be a degree of comparison.

Mr. Tolles: What we are talking about is a telephone receiver, transmitter and induction coil of standard make. Just because one set is made by the Kellogg people and the other by somebody else does not affect the question we are [fol. 2210] now considering.

Mr. McConnaughey: Do any of these companies that are covered in your exhibit use the Western Electric receivers, transmitters and induction coils?

The Witness: I will qualify my answer; they do in part use Western Electric receivers, transmitters and induction coils, but not of the same type as those leased by the Bell Telephone Company to its subsidiary companies.

Mr. Burr: The only material difference is in the code number, is it not?

The Witness: Well, that is my understanding, it is not the same instrument.

Mr. McConnaughey: Is there any actual difference in the equipment?

The Witness: I have never been able to find any.

Mr. McConnaughey: Well, then they are the same excepting for the number under which they are sold; is that what the code number is in the catalogue?

Mr. Burr: Yes, sir.

The Witness: As far as performance is concerned I would not give anything for any difference between them.

Mr. McConnaughey: Well, how about cost or market value?

The Witness: I have no means of arriving at the cost of an instrument that I cannot buy or that is not sold, and that is the case of the one that is given to the Bell subsidiaries.

Mr. McConnaughey: Well, is there any difference in them [fol. 2211] that would make a difference in the cost as far as you can see?

The Witness: I would not say there is any difference.

Mr. McConnaughey: Or justify any difference in the price to the trade?

The Witness: None in my estimation.

Mr. McConnaughey: Then you consider that what you have based your exhibit on are to all intents and purposes exactly the same so far as function and apparent cost is concerned?

The Witness: Based on my experience in the field of 25 years and the tests that I have made on different types of receivers, transmitters and inducton coils, I would say there is no difference as far as performance is concerned.

Mr. McConnaughey: Now is that true as between what is made by The Western Electric Company and what is made by other companies?

The Witness: That is true.

Mr. McConnaughey: Throughout the field they are all about the same thing, are they?

The Witness: I consider them so.

Mr. McConnaughey: Are they covered by patents?

The Witness: I could not answer that question. The different makes of transmitters are covered by patents; whether they are valid patents or not is another thing.

Mr. McConnaughey: Are you familiar with the costs of all these different makes?

[fol. 2212] The Witness: I am.

Mr. McConnaughey: That is embodied to some extent in your exhibit?

The Witness: Yes, sir, the detail of the exhibit shows the absolute figures of cost.

Mr. Burr: Testimony of this same general sort was not only admitted in the New York Telephone case before the New York Commission, but it was commented on in the opinion of the Commission.

Mr. McConnaughey: The principal objection to it as far as I can see is the extent to which it opens the door for comparisons of this character all along the line. Now if the door is opened for everybody to offer this sort of evidence, why, fine.

Chairman Marshall: The objection will be sustained.

Mr. Burr: Note an exception. Now we want to make our record.

Chairman Marshall: Tell the stenographer what you expect to prove.

Mr. Burr: And it seems to me that the best way to make the record would be to permit questions to the witness and answers by him, with the understanding, however, that we are only making a record in that way, and that that is probably the shortest way in which we can make the record.

Mr. Dotson: That is your method of offering the proof.

[fol. 2213] Chairman Marshall: We are following the procedure in Courts. The rule is to read into the record what you expect to prove.

Mr. Hagelbarger: We object to that procedure.

By Mr. Burr:

Q. Will you take up your Exhibit No. 1 and explain it to the Commission, stating finally the actual average experience of the four companies covered by the exhibit in the matter of sub-set charges as of October 31st, 1925, the date of your study?

Mr. Hagelbarger: We object.

Chairman Marshall: Objection sustained.

Mr. Burr: Note an exception.

Mr. Burr: And let the record show that the witness, if permitted to answer, would say that his exhibit shows first the composite annual carrying charge applying to the receiver, transmitter and induction coil of a telephone sub-set, based on the experience of the four telephone companies named, which companies own the sub-sets; those

carrying charges to be in lieu of the charges incurred by a telephone company which leases similar sub-sets, or uses them under a license agreement.

The study is based on an analysis of these charges applying to representative independent telephone companies in Ohio, being the four companies named, and having 38,029 connected load. The four telephone companies were chosen because they are four successful, representative, independent companies operating in four different parts of the State [fol. 2214] of Ohio and they include both automatic and manual operation.

The number of sub-sets on which the study is based represent about ten per cent of the total number of independent telephone companies' sub-sets in Ohio.

In preparing the exhibit the actual experience of the four companies has been used in arriving at the result shown, with the exception of the rate of return and the rate of depreciation.

The rate of eight per cent has been used for return due to the fact that that is the minimum rate of return upon the fair value of the property of a public utility, such as The Ohio Bell Telephone Company, in order to attract capital to the enterprise.

The rate of eight per cent for depreciation is based upon the experience of the witness and upon his judgment in the matter of the proper annual charge on account of depreciation of telephone sub-sets; that is to say, of the class of property under consideration.

The various charges are shown on page 4 of the exhibit which shows the composite percent of annual carrying charge applying to the receiver, transmitter and induction coil of such a telephone sub-set, based on the actual experience of the companies named as of October 30th, 1925.

The charges are set up particularly for instruments in service and instruments in stock, the two sub-sets appearing in columns A and B respectively considering the several items shown in Sheet No. 4 of the exhibit, the first item [fol. 2215] is that of insurance, which represents the actual experience of the four companies under consideration. No insurance is shown for instruments in service, for the reason that it is not the custom of those companies to carry insurance on those instruments. Insurance is carried by them, however, on instruments for stock, and .16 per cent

is the amount shown for that purpose in the actual experience of the four companies.

In Line 7 on Page 4 the rate of return is shown at eight per cent for both classes of instrument. The reason for that per cent has already been stated.

In line 8 is the allowance for income tax, 1.12 per cent; the reason for this item being that the company cannot have any net return without paying an income tax on that return; and if the instruments, that is to say, the sub-sets, are to be productive of income, the income tax must first be deducted. That is in accordance with the general rule of the Commission in computing income tax. The item of income tax is based upon the actual taxable income of the four companies.

Attention has already been called to the general practice of The Public Utilities Commission in this respect. If the actual practice of the Commission be followed with respect to the income tax the item of 1.12 per cent would be 1.14 per cent.

With respect to the item of property tax shown in Line 9, the amount 2.25 per cent represents the actual experience of the four companies in the matter of their property tax [fol. 2216] for sub-sets.

Item 10, "Maintenance Material", applies to instruments in service only. Nothing is allowed or taken into consideration for maintenance material in the case of instruments in stock.

With respect to the instruments in service no consideration has been had of the item of labor because the same labor charges would be experienced by an owning company as would be experienced by a leasing company.

The two per cent for maintenance material shown in Line 10 represents the actual experience of the four companies in that respect in their several localities.

The percentages shown in Lines 6, 9, 10 and 11, on page 4 of the exhibit, apply to the cost of the instruments as shown on Sheet No. 5.

In Line 11 of Sheet No. 4 the rate of depreciation is fixed at eight per cent, for the reasons already stated, and the Commission will note that it is computed upon instruments in service only. That per cent represents the judgment of the witness as to what should be the proper per cent for this item as heretofore stated.

The total of the items down to Line 12 is 21.37 per cent for instruments in service and 11.53 per cent for instruments for stock.

Under the heading shown in Line 13 as "detail of Instruments per revenue producing station", Line 14 shows the average number of sets of instruments in service per revenue producing station to be 101.77 per cent. The percent-
[fol. 2217] age above 100 covers sets used by the company for testing, for switchboard sets and those left in vacant premises.

In Line 16 on page 4, the average per cent number of sets of instrument for stock per revenue producing station is 5.99 per cent.

Both of the per cents shown in Line 15 and 16 represent the actual experience of the four companies under consideration.

The composite per cent of annual carrying charge per revenue producing station, as shown on Line 21, is arrived at by multiplying Line 12a, that is to say, 21.37 per cent, by Line 15, plus Line 12b, times line 17, equals 22.44 per cent as the composite per cent of annual carrying charge per revenue producing station.

In arriving at the composite annual carrying charge applying to the receiver, transmitter and induction coil of a telephone sub-set such as those under consideration, based on the experience of the four companies in question, in lieu of the charges incurred by telephone companies leasing similar sub-sets, the Commission will find on Sheet No. 5 of Hirsch Exhibit No. 1, the heading "Average cost of telephone parts including freight".

In Line 2 on that page the cost of the telephone receiver is shown to be $2.13.

In line 3 on that page the cost of the telephone transmitter is shown to be $2.12.

In line 4 the Cost of the telephone induction coil is shown to be 91 cents, making a total average cost per set, as shown [fol. 2218] in Line 5 and 6, of $5.16 per set.

In arriving at the composite annual carrying charge per revenue producing station, the Commission will note that in Line 8 the average cost of such a set is shown again as $5.16.

In Line 9 the composite annual carrying charge in terms

of percentage of 22.44 per cent has been brought forward from Line 21 on Sheet No. 4.

In Lines 10 and 11 the composite annual carrying charge per revenue producing station is shown to be Line 8 multiplied by Line 9, amounting to $1.1579, or, in round figures, $1.16.

From this study it is evident that a telephone company, such as The Ohio Bell Telephone Company, could afford to pay by way of rental or license as much as $1.16 per year per set of receiver, transmitter and induction coil before it would be more economical for such a company to buy and own the sets outright.

In fact, it is the opinion of the witness that the renting or licensee company could afford to pay even more than $1.16 per year per set before it would be more economical for it to buy and own such sets outright.

Mr. Burr: Now we again offer in evidence Hirsch Exhibit No. 1, and I assume that the ruling of the Commission will be the same as heretofore.

Mr. Hagelbarger: We object.

Chairman Marshall: Objection sustained.

[fol. 2219] Mr. Burr: Note our exception, and let the record further show that we expect to prove by the exhibit everything shown in it not covered by the statement of council heretofore made.

You may stand aside, Major Hirsch, and thank you very much.

[fol. 2220] And also GEORGE B. WILLIAMS, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Q. Mr. Williams, in your appraisal exhibit you show certain amounts representing the items of cost entering into the reproduction of the property of The Ohio Bell Telephone Company under the heading of omissions, engineering, general expense, taxes during construction and interest during construction. Those, as I understand it, are the so-called construction overheads or indirect costs, are they not?

A. That is true.

Q. Will you please take them up in their order and evaluate each of them with respect to the property under consideration?

A. I have studied the items of construction overhead costs, or, as they are sometimes called, undistributed construction expenditures, during the period of 11 or 12 years past. That study was carried on particularly during the time that I was with The Public Utilities Commission of Ohio, and particularly since I have been associated with The Central Union and Ohio Bell Telephone Companies.

This study consisted of a study of the various authorities on these subjects. It consisted of the analysis of actual construction costs for these items of both the independent and Bell telephone companies over this period of years [fol. 2221] already referred to.

I have had available and have had studied the actual construction costs particularly for The Ohio Bell Telephone Company and the Central Union Telephone Company during the period from about the middle of 1919 to the present time.

I have analyzed the actual costs of each of these companies during that period.

Taking up first the item of omissions, the figures shown on page 116 of Williams Exhibit 7c is the same figure of $2,145,031.00 already testified to by Mr. Schneider.

This figure represents two per cent of the total of $107,251,561.00 of physical property immediately preceding the item of omissions.

Considerable testimony was given both by Mr. Schneider and myself during the hearings on the 1924 inventory and the 1925 inventory relative to this item. My own judgment is based primarily upon studies made relative to the item of omissions in connection with rechecks of various telephone company valuations made under my direction and supervision in the State of Ohio.

I have also taken into consideration the omissions specifically referred to by Mr. Schneider and Mr. Morrill in connection with this case, and my judgment, based upon all of these things, is that the amount of $2,145,031.00 is a conservative figure for this purpose.

Taking up next the item of engineering found on page 118 of Williams Exhibit 7c, I have used the same figure of $5,469,830.00 testified to by Mr. Schneider.

[fol. 2222] I have studied the subject of engineering applying to telephone properties in the State of Ohio during the last 11 or 12 years and have made at various times analyses of the actual engineering costs of The Central Union Telephone Company and The Ohio Bell Telephone Company and can substantiate Mr. Schneider's statement that the actual experience of The Ohio Bell Telephone Company for some years past has been in excess of five per cent.

The figure here used is arrived at by taking five per cent of the physical property total immediately preceding, including omissions, which figure was $109,936,592.00.

Q. Why have you computed engineering upon the item of omissions as well as upon the property comprising the physical plant property?

Mr. Postle: Are his figures correct? He said 109,996,000 and we have 109,396,000.

The Witness: Whatever my statement previously was, it should be as you have last stated it.

Mr. Postle: You said 109,996,000.

The Witness: It should be $109,396,592.00.

The reason for computing the engineering on the total including omissions is because the omissions themselves are part of the physical property which are included in the inventory and valuation as they are in terms of percentage for the reason that they have not been included specifically in detail in the various accounts. But in this connection it would of course be necessary to engineer all of the property [fol. 2223] including that part carried as a percentage in omissions as well as the part carried in detail in the accounts.

The next item in the construction overhead costs is that of general expense, found on page 120 of Williams Exhibit 7c.

In this connection I have also studied the item of general expense for a considerable number of years past and have analyzed the actual expenses of The Ohio Bell Telephone Company and The Central Union Telephone Company relative to this item since 1919.

The analysis of the actual costs for this particular item for these companies showed between 1½ and 2 per cent upon the physical property including engineering. Two

per cent has here been used for the reason that, as Mr. Schneider stated, the costs for general expense as shown in the records of the Company do not include such items as the cost of incorporation, the costs of revenue stamps incident to incorporation, and the costs for employers liability insurance.

Mr. Postle: How about legal expense?

The Witness: There is legal expense to a certain extent in our actual experience.

Mr. Postle: He said that was not included.

The Witness: I think he said his legal expense relative to incorporation was not included.

By Mr. Burr:

Q. Did you intend to include in your incorporation costs the fee paid the Secretary of State as a condition precedent [fol. 2224] to such a company becoming a corporation?

A. I did not intend to state that such an item was included in our actual experience. I had in mind when I said that expenses incident to incorporation were not included in our actual expense, such an item as you mention as that paid to the Secretary of State. In other words, such an item is not included in our actual experience and should be allowed for in making up the total to be included for general expense in the production cost new of this property.

Q. What are some of the other items which constitute general expense which are not included by the company as such?

A. I have in mind, as already stated, revenue stamps and employers liability insurance.

Q. What about workmens compensation?

A. Well, that is what I had in mind.

Q. You intend to cover that by employers liability insurance?

A. Yes.

Q. What about public liability insurance?

A. That is another item that is not reflected in our general expense.

Q. How about fire insurance?

A. I am not sure about that particular item. I am not certain whether there is anything included or not.

Q. For what?

A. For fire insurance. I feel sure that the amount is not as much as would be included in the reproduction of the property.

Q. What about public liability insurance?

A. I have already stated that that is not included.

Q. Did you include the cost of issuing securities?

[fol. 2225] A. No; no cost of that kind except what might have been in each of the particular years for that purpose; that is, that was not an amount comparable with what would be experienced in the reproduction cost of the property in any one year.

Q. When you say there was not, you mean there was not in the records of the company?

A. Yes, sir, that is right.

Q. What about the cost of stock listing?

A. Nothing is included in that in the actual experience of the company.

Q. Would those costs, such as costs of issuing securities and stock listing, be incurred in the cost of the reproduction of this property?

A. In my judgment they would, yes. —

Q. What about the cost of mortgages, including transfer?

A. There may have been some transfer fees reflected in the experience of the company relative to general expense, but in my judgment not in proportion at all to what you would have in the reproduction of the property.

Q. And what about the salaries of general officers who supervised the construction and development of the property?

A. In my judgment they would be at least as much in proportion to the cost of the property as reflected in the actual experience of the company.

Q. The next item is that of taxes during construction, is it not?

A. Yes, sir. If I have not already stated, I would like to state that in my judgment the proper amount for the gen-[fol. 2226] eral expense to be included in the cost to reproduce new as of a date certain for The Ohio Bell Telephone Company's property is $2,297,328.00.

Q. Before leaving the subject, why is it accumulated on the total for the physical property plus the amounts for omissions and engineering?

A. Because the general officers of the Company and the

expenses or expenditures incident to general expense would apply to the total of all expenditures up to that point including the physical property, the omissions and the engineering; and also because the studies which I have made as a basis for determing the general expense were set up in the same manner as I have set up and arrived at the general expense for this study. In other words, the percentage for general expense in these studies was found relative to the total reproduction costs, or the total costs experienced including the omissions and engineering.

Q. The next item is that of taxes during construction; how did you arrive at that?

A. I arrived at this figure of $1,682,378.00 by adopting Mr. Schneider's figure after studying his manner of computing this figure and upon the actual taxes paid by The Ohio Bell Telephone Company. In my judgment it is the proper way to arrive at it, and the figure arrived at is reasonable for that purpose.

Q. That is to say, by doing what?

A. By finding the actual taxes paid for the year 1924 and relating that to the taxable property, or relating that to the reproduction cost of the property as of January 1st, [fol. 2227] 1924, and then carrying that forward to the property as of June 30th, 1925.

Q. Why didn't you use as the basis the taxes for the year 1925?

A. Because part of the taxes for the year 1925 have not yet been paid; that is, the taxes for instance for the property as of January 1st, 1924, are paid in two halves, the first half in December, 1924, and the second half in June or July, 1925, and we had the record available of the taxes actually paid for the year 1924, and that was the last year for which we had the actual payments already made.

Q. What computation, if any, did you make——

Mr. Dotson: Just a moment; do your tax computations include special assessments that were levied in various political taxing districts of the State where you have property located?

The Witness: May I ask what you mean by special assessments?

Mr. Dotson: For public improvements that were assessed

the public; that the cost was assessed back upon properties that were benefitted by the improvement?

The Witness: I assume that they would, and in my judgment they should, because any expenditures that we make for taxation purposes would and should increase the value of our property by just that much.

Mr. Dotson: Then you mean to say you have carried into the amount shown in your exhibit for taxes, the assessments for special improvements as well as the general [fol. 2228] taxes that were imposed upon the properties?

The Witness: All property taxes, excluding from our taxes the Excise tax, and the Public Utilities tax and the Income tax.

Mr. Tolles: Do you know that there were any assessments to include in that particular year; that there were any special assessments?

The Witness: I do not recollect at the present time whether there were or not. I could find out by checking up.

By Mr. Burr:

Q. And will you do that, Mr. Williams?

A. Yes, sir.

Q. I believe that the item of net additions has already been covered by your Exhibit No. 8 heretofore offered in evidence, has it not?

A. Yes, sir, that is right.

Q. So that all of the items in the appraisal have now been covered by your testimony with the exception of the cost of establishing business; is that correct?

A. Yes, sir.

Chairman Marshall: I guess we might as well adjourn at this point.

And thereupon the further hearing of this cause was adjourned until Thursday, January 28th, 1926, at ten o'clock A. M.

[fol. 2229] Morning Session,
Thursday, January 28, 1926.

And also, GEORGE B. WILLIAMS, Resuming the stand for further examination in chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Q. At the close of yesterday's hearing, Mr. Williams, you were asked by Mr. Dotson as to whether or not the item of taxes during construction referred to by you in your testimony, included assessments, that is assessments levied upon the land as against the actual real estate taxes and personal taxes paid by the company. What have you to say now with respect to the matter of assessments? Can you answer Mr. Dotson's inquiry?

A. I think I can. I have investigated that item and find that the assessments are carried in a different account from the taxes and that the assessments were not used in the figure if computing taxes during construction.

Q. Will you take up next, if you please, the item of interest during construction referred to in your appraisal?

A. I have studied the item of interest during construction for several years past. I have computed the interest during construction on a great many properties, both of The [fol. 2230] Ohio Bell Telephone Company and of independent companies. I have studied the construction program, and the computation of interest during construction by which Mr. Schneider arrived at his figure of $7,481,264.00.

My conclusion in regard to this item and this amount is that the sum is conservative for this purpose, my reasons being, first, that the amount of $7,481,264.00 is approximately 6 per cent or a trifle over 6 per cent of the total immediately preceding upon which interest would have to be paid during the construction period.

This means that to arrive at the 6 per cent charged for the money outstanding during the construction period, that the construction period would have to be equivalent to a two-year construction period, giving a mean time of one year during which the money would be outstanding.

Now in my judgment, having in mind appraisals that I have made of various exchange properties of the Ohio Bell Telephone Company during past years, I should say approximately 85 or 90 per cent of the exchange property of the Ohio Bell Telephone Company would require a construction period of in excess of two years in order to complete each exchange.

Now with that thought in mind, in my judgment it would require at least a two-year construction period in order to build the property; that is the equivalent of a two-year

construction period in which the money would be outstanding during a period of one year.

[fol. 2231] With that test in mind I feel that the allowance of $7,481,264, which represents a computation for the money outstanding for a period of only one year is, as I say, conservative, and for that reason I have adopted it and used it in my summary of the cost to reproduce the Ohio Bell Telephone Company's property as of June 30th, 1925.

Q. What period of construction and development did you take into consideration?

A. A five year period the same as Mr. Schneider did.

Now I do not want to have any confusion on that subject. I think that the five-year period is proper without any question; but I say that the amount of interest arrived at would be the equivalent only of a two-year period for the time that the money was outstanding, so that it must be very conservative.

Mr. McConnaughey: That is a two-year period for the entire amount?

The Witness: That is right, yes, sir.

Mr. McConnaughey: And the average mean time would be half of that?

The Witness: For one year, yes, sir.

By Mr. Burr:

Q. You have already referred to the item of net additions in your exhibit number 8, so that that brings your total plant and equipment to what amount?

A. $126,495,199 for the cost to reproduce new as of June 30, 1925.

Q. What is your judgment as to that amount?

[fol. 2232] A. My judgment is that that is a conservative figure for that purpose.

Q. I believe that you already have testified as to the reproduction cost new of the items of office furniture and fixtures, tools, implements and store equipment, and stable and garage equipment, have you not?

A. I have.

Q. Taking your testimony with respect to those items and adding it to the amount just testified to what, in your judgment, is the reproduction cost new of the total plant and equipment of The Ohio Bell Telephone Company as of

June 30th, 1925, excluding of course working capital including supplies, miscellaneous construction expenditures, construction work in progress and the cost of establishing business and going concern value?

A. $128,044,199.00.

Q. What have you to say with respect to the item of working capital including supplies?

A. I have testified on the inventory in considerable detail in regard to working capital including supplies, and stated the percentage that I believed should be applied, and which has been applied and computed by Mr. Schneider, and I have adopted his figure of $6,350,000.00 for this summary.

Q. What is your judgment as to that amount?

A. I think that the figure is proper.

Q. You have already referred to the item of miscellaneous construction expenditures, have you not?

A. I have.

Q. And what have you to say as to the item of construction work in progress?

A. The construction work in progress represents expenditures for plant and equipment that has not yet been [fol. 2233] transferred to the plant and equipment accounts. The figure that I have used is $2,223,718.00, which is the same figure testified to by Mr. Schneider and which has been taken from the records of the company representing the actual construction expenditures for these items, which figure I have checked and after having checked it have adopted and used in any summary.

Q. Is anything claimed in the appraisal representing interest during construction upon the amount representing the construction work in progress?

A. No, sir; the interest has been eliminated from construction work in progress.

Q. Summarizing your testimony up to this point, what in your judgment is the reproduction cost new of the property of the Ohio Bell Telephone Company as of June 30, 192-, exclusive of the cost of establishing business and going concern?

A. $136,630,922.00.

Q. Have you summarized the appraisal on a separate sheet such that it is available for counsel?

A. I have. (Producing same.)

Mr. Burr: The summary sheet may be marked Williams Exhibit Number Nine, and is offered in evidence.

And thereupon the sheet last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 9.

Q. Have you prepared——

A. Pardon me, Mr. Burr; I think in connection with this [fol. 2234] exhibit I should probably call your attention to two things; the first is that exhibit number 9 is the summary of the property of The Ohio Bell Telephone Company exclusive of that property which is to be disposed of. Also that subsequent to the preparation of Williams Exhibit 7-a, b and c, we found some discrepancies in the appraisal itself, due partly to multiplication, partly to decimal points, and partly to omissions. The omissions more than offset, by quite an amount, the discrepancies due to the other figures.

Now it was not my intention to place in the record the detail of the various discrepancies that were found, but I have that detail and will be glad to furnish it to the Commission's engineer at any time that he wants it.

Q. Have you prepared a statement or summary showing the property to be disposed of as of June 30, 1925, being Account 111 for miscellaneous land and Account 111 for miscellaneous investment—buildings?

A. I have. (Producing same.)

Mr. Burr: This document may be marked for identification as Williams Exhibit Number 10, and is offered in evidence.

And thereupon the statement last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 10.

[fol. 2235] Mr. Burr: Mr. Williams may stand aside, if there are no questions.

Mr. Schuler: Mr. Williams, this item 13, "cost of establishing business"; did I understand you to say that that includes going concern value?

The Witness: I have not testified to that at all, yet, Mr. Schuler.

Mr. McConnaughey: There has been no testimony on that at all.

Mr. Tolles: That item has not yet been reached, Mr. Schuler.

Mr. Burr: If there are no further questions to be asked of Mr. Williams at this time he may stand aside.

Mr. Postle: Are you going to question him, Mr. Burr, about this exhibit number 10; are you going into the detail of that property?

Mr. Burr: The property is detailed in the appraisal, Mr. Postle.

Mr. Postle: Is it?

Mr. Burr: Yes sir. And if after examining the appraisal with respect to it you desire any further information it will be forthcoming. I think you and I have talked about that somewhat over the telephone, but so far as I know up to this time you have all the information that you have requested; but if you require any more and will let us know, we will undertake to furnish it.

Mr. Postle: All right.

[fol. 2236] And also F. M. Stephens, called on behalf of The Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Will you state your name?

A. F. M. Stephens.

Q. Where do you live, Mr. Stephens?

A. Cleveland, Ohio.

Q. What is your occupation?

A. General plant superintendent of the Ohio Bell Telephone Company.

Q. Where did you receive your education?

A. I graduated from the University of California, class of 1909, college of Electrical Engineering.

Q. After graduation what did you do?

A. In May, 1909, the same month I graduated, I accepted a position with the Pacific Telephone & Telegraph Company, in their plant engineering department.

Q. At what city?

A. At San Francisco.

Q. Proceed.

A. After working as an exchange engineer for a few months I was appointed District Plant Engineer in charge of the engineering of the entire outside plant for the city of San Francisco.

Q. What did your duties involve in brief?

A. I engineered the entire cable plant, the underground and aerial cable plant, the building cable plant, the underground conduit plant, and in fact all of the plant outside of the central office buildings.

[fol. 2237] Q. What was the situation in San Francisco at that time with respect to telephone construction, and generally?

A. That period was during the time that San Francisco was recovering from the result of the fire and earthquake. It was a period of very rapid development, and during the period that I was connected with the company there we rebuilt practically the entire property.

Q. How long did you work for the Pacific Company in San Francisco?

A. Three years.

Q. What was the condition of the underground conduit and cable in the downtown section of the city of San Francisco, as the result of the fire and earthquake?

A. All downtown conduit and cable was practically destroyed by the earthquake. That was primarily due to the fact that the streets and the conduit in those streets was built on tide lands—filled in land. The street sank at the time of the earthquake and destroyed all of the conduit. And it was in connection with the reconstruction of that conduit and cable plant that there was miles of conduit torn out of the streets and replaced and repaired.

Q. Under whose supervision?

A. That work was done under my entire supervision, and at that time I had every opportunity to determine the effect of deteriorating agents on underground conduit.

Now in addition to that and as a direct result of the fire that they had there at that time, the City undertook to put in and did put in a complete high-pressure salt water auxiliary fire system. And it was a considerable problem to [fol. 2238] install such a system which was constructed primarily of 18 and 24 inch mains in the streets that were already congested with underground conduits, sewers and

so forth. And a committee was formed of representatives of the telephone company, the other public utility companies, and the city. I represented the Pacific Telephone & Telegraph Company on that committee.

It was part of my duty at that time to inspect all the excavations that were made by the city's contractors wherever the excavation for watermains was made adjacent to the conduit of the Pacific Telephone & Telegraph Company. I made that inspection at the time the water excavation was being opened up. I watched the construction through the period and examined the conduit again when the excavation was being refilled. This was primarily for the purpose of determining the amount of damage that had been done to the conduit through the negligence of the city's contractors.

Mr. Hagelbarger: Your Honor, I object to this. It seems to me that it relates to something that took place in San Francisco that probably could never take place in Ohio, and it takes lots of time and encumbers the record.

Mr. Burr: The testimony is not offered to show the effect of earthquakes on a conduit.

Mr. Hagelbarger: Well I did not imagine you would ask him the question to bring forth this answer.

Mr. Tolles: It is a matter of the qualification of the witness,—his experience.

Mr. Hagelbarger: His experience with water pipes cer-
[fol. 2239] tainly is not involved here, or investigating committees, or committees of citizens or the filling in of tidewater land, and so forth.

Mr. Burr: If you will let me proceed with my statement I will say that the purpose of the testimony is to show the opportunity which the witness had for examining conduit which had been in place; telephone conduit which had been in place in the City of San Francisco.

It is not to show the effect of the earthquake on the conduit, but to show the condition of excavated conduit after it had been in the ground, and an opportunity which very few witnesses appearing before this Commission, so far as I know, have had.

There is very little more on the subject, and I think we will make time if the witness may be permitted to proceed.

Commissioner Poor: I think he may proceed. It all goes to his experience, his qualification.

The Witness: The purpose of that inspection, as I said, was to determine the amount of damage.

Now I actually found, through the inspection of miles of conduit, that was exposed to view, that there had been very little or no actual deterioration taken place in that conduit, even though much of it had been buried in the ground for years.

I did find some little deterioration but it was at places where there had been previous excavations; where the conduit itself had been interfered with through some other [fol. 2240] outside sources.

There were some places where there was evidence that the concrete had not been properly mixed at the time it was placed. But even there that fact could only be determined by the relative ease with which the conduit could be picked from around the tile duct.

Q. Expressed in percentage, what in your judgment was the per cent of depreciation which you found in the excavated telephone conduit?

A. Well, taking the whole structure including the manholes,—and the manholes were really the places where the greatest amount of deterioration had taken place,—I would say that it did not exceed 3 per cent. That would be a very liberal estimate of the amount of deterioration.

Q. How did the methods, the specifications and materials used in the construction of the Pacific Company at San Francisco compare with those of the Ohio Bell Telephone Company?

A. The specifications used by the Pacific Telephone and Telegraph Company at that time were the specifications prepared by the American Telephone and Telegraph Company, and I am advised that they were exactly the same as the ones which were used by the Ohio Bell Telephone Company prior to that time.

As a matter of fact since I have been in the business—in the 16 years that I have been here, there has been no material change at all in the specifications, methods or materials used in the construction of underground conduits.

[fol. 2241] Q. I think you said that you remained in San Francisco——

Mr. McConnaughey: While he is talking about it—can you give us any information about the age of that conduit when you inspected it?

The Witness: I could not; no, sir; I did not investigate that fact; although I know that considerable of it was among the first conduit that had been placed in the town.

Mr. McConnaughey: A matter of 20 or 25 years?

The Witness: I doubt if it would go back that far at that time. I do not know when the exchange was established out there, and if it was 25 years old 16 years ago, that would take it back pretty far. There was not much conduit. They were still putting in overhead aerial wire.

Mr. Schuler: Was it vitrified or fibre?

The Witness: It is made up—they had all kinds of conduit there. As a matter of fact out there they use some of this creosoted pump log, and they had some orangeburg fibre conduit. But at least 90 per cent of their conduit was vitrified clay duct with concrete around it.

Mr. Schuler: From the type of the structures could you give us an estimate of how long it had been in the ground when you examined it?

The Witness: Well I don't know. It has been my experience from any conduit that I have ever seen excavated, that the per cent condition of that conduit did not vary with the length of time that it had been in the ground. I have never considered it from an age standpoint. It has more to do with what happened to that conduit after it was placed [fol. 2242] in the ground, Mr. Schuler. If it was damaged by plumbers or anybody cutting into the street——

Mr. Schuler: That is outside of external interference it is practically permanent in your opinion?

The Witness: In my opinion, as far as any experience that I have had is concerned.

Mr. Dotson: Does the wear and tear or effect of the elements in this climate in Ohio prove more damaging to such installation than weather conditions in San Francisco?

The Witness: It might on account of the frost in the ground. But we are very, very careful always to place our conduit below the frost line. And if we do that I cannot see any possible reason that there will be any difference in this climate—the effect on the amount of deterioration, and wear and tear.

Mr. Dotson: From your experience and observation, what difference, if any, have you observed?

The Witness: I have observed no difference at all.

Mr. Schuler: Was there any rot or fungus on the fibre conduit?

The Witness: Why on some of the fibre conduit that they had there there was some of the very original fibre conduit that they put in they could not pull cables through it because it was of such a manufacture that it would ball up on the inside of the conduit and they had to cut that out in many cases in order to pull it through the conduit that had been around it in order to get it out. It was not a very satisfac- [fol. 2243] tory proposition.

But I want to state here that as far as I know, from my inspection, I found none of that type of conduit in this state. It was something that was just local, the same as the use of redwood boards out there to build some of the original conduit. It was due to the local conditions there that did not exist in Ohio.

By Mr. Burr:

Q. After your three years service with the Pacific Company, what did you do?

A. In May, 1912, I was transferred from San Francisco to St. Louis, and accepted a position with the Southwestern Bell Telephone Company as outside plant engineer for Missouri and Arkansas.

Q. What were your duties while engaged in that employment?

A. As plant engineer I engineered all of the construction and reconstruction outside of the central office buildings for both states.

Q. What opportunities, if any, did you have during that employment to ascertain the condition of various classes of telephone plant which had been in service?

A. Well probably I had better go on and say that in 1917 I was appointed construction superintendent for the Eastern part of Missouri including St. Louis.

In 1918 I was made division plant superintendent for the same area and as such I had charge of all the engineering construction and maintenance of the property in the eastern part of Missouri including St. Louis. And in 1919 I was made plant superintendent for the states of Missouri and Arkansas, and as such had charge of all the engineering [fol. 2244] of outside plant, the construction of that plant, and the maintenance of the entire property including central office equipment and buildings.

Q. From May 1912 then, until some time in February, 1923, you were with the Southwestern Bell Telephone Company in the various capacities covered by your next previous answer?

A. This period in the Southwestern Company was one of very great activity. Practically all of the property in the states of Missouri and Arkansas was rebuilt, reconstructed during that period. As an example in the state of Arkansas there were approximately 100 exchanges. During the period that I was there and in charge of that work, over ninety-five of those exchanges were completely reconstructed.

Q. Who determined whether or not they should be reconstructed?

A. It was finally my job to determine that point.

Q. In arriving at your decision with respect to those exchanges what inspections if any did you make of the physical property comprising the exchanges?

A. Well of course during that period, why I was continually inspecting and seeing and studying effects of deterioration, and also considering the adequacy of the property from every standpoint.

I might say that it was during that period that many of the old original pioneer properties, open wire properties were replaced with permanent cable construction, and I had great opportunity, and I availed myself of that oppor-
[fol. 2245] tunity at all times to determine the effect of deterioration on telephone property.

Q. What study did you make at that time of the effect of deteriorating agents upon telephone property of all kinds?

A. During that period I was in charge of all of the inventory and appraisal work. It was quite a while ago, before they had particular departments for that work. And as plant engineer I did a great deal of the original appraisal work on all of the property in Missouri and Arkansas, and quite a bit of that work was done in connection with rate cases and for the purpose of those cases I determined the per cent condition of those properties or quite a bit of the property.

Q. Now as heretofore stated, you came to the Ohio Bell Telephone Company in February, 1923. In what capacity were you then employed by the Ohio Bell Telephone Company?

A. General plant superintendent, the same position that I have now.

Q. What work of the company comes within your jurisdiction as general superintendent of plant?

A. I have charge of all of the work in the plant department that ordinarily is handled by any plant department of a telephone company. This work includes the engineering of all of the property located outside of the buildings of the company. It includes the construction—well I might say that it includes the engineering of the underground conduit, the underground cables, the pole lines, aerial wire——

Q. Aerial cables?

A. Aerial cables.

Q. For toll or exchange or both?

A. Both. It includes building cables, private branch [fol. 2246] exchange installations; in fact all associated telephone property. I have charge of the construction of all of these many items.

Furthermore, I have entire charge of the maintenance and repair and upkeep of all of the property including central office and buildings.

Q. You say "including central office"; you mean central office equipment?

A. I mean central office equipment and buildings, yes, sir.

Q. To what extent do the expenditures of the company for telephone property rest upon your recommendation?

A. Well to a very great extent upon the recommendation of the engineers in my department, and upon my judgment the entire expenditure for new property and for maintenance expense rests.

Q. How much, if you know, has been expended directly under your supervision for new plant for the Ohio Bell Telephone Company in the years 1921 to 1925 inclusive, and by "how much" I mean approximately how much?

A. I cannot reply to that. I was not here in 1921, Mr. Burr. But in the period that I have been here from 1923 to 1925, inclusive, the gross expenditures, not including any expenditures for property purchased, were approximately $37,700,000. And during that period the value of the plant removed from service was approximately $19,000,000. In addition there was spent directly under my supervision in connection with the maintenance, upkeep and repair of the property in this state, approximately $13,500,000.00.

[fol. 2247] Q. During what period?

A. During the period 1923 to 1925 inclusive, since I have been in charge of the property in this state.

Mr. McConnaughey: Including all of 1925?

The Witness: Yes, sir; up to December 31st.

Mr. Postle: What was the nineteen million dollar figure for?

The Witness: That was the value of the plant displaced; taken out; not including sales.

By Mr. Burr:

Q. Do you know approximately how much has been expended by the Ohio Bell Telephone Company for new plant in the years 1921 to 1925 inclusive?

A. Yes, sir, I do.

Q. From the records of the company?

A. Yes, sir.

Q. How much is it?

A. Excluding purchases of going or completed plant, there has been in excess of $46,600,000 spent during that period for new property.

I also have the figure here for the plant removed during that same period, in excess of $23,500,000,—I beg your pardon on that removal; that includes the value of the plant sold, and so did my figure of nineteen million dollars, as the plant removed during the years 1923 to 1925 inclusive.

Mr. Dotson: You mean by that to include the sales which you said formerly you did not include?

The Witness: Yes, sir; I would like to make that correction.

By Mr. Burr:

Q. The 23 million dollars included all plant removed?

[fol. 2248] A. Yes, sir, for the period September 21, 1921 to December 31, 1925.

The 19 million dollars included all plant removed including sales for the period January 1st, 1923 to December 31, 1925.

Mr. McConnaughey: Have you the figure there not including the sales on removals for this same period, September, 1921, through 1925?

The Witness: I have not that.
Mr. McConnaughey: All right.
The Witness: It could be obtained.
Mr. McConnaughey: Well it is not necessary.

By Mr. Burr:

Q. In connection with your position as general superintendent of plant, what personal knowledge have you of the plant of the company throughout the state?

A. Well for the purpose of engineering and constructing and maintaining this property I am required to have a personal knowledge of the condition of the property, and for that purpose I have traveled over this territory and I have inspected from time to time and almost continuously practically all of the property in this state belonging to the Ohio Bell Telephone Company.

Q. Do you determine the property from the standpoint of its adequacy as well as to determine its physical condition?

A. Yes, sir; a determination of the adequacy of the property and a determination of the condition of the property is necessary in the consideration of making expendi- [fol. 2249] tures on the property. These two items in connection with the consideration of the relative income of building new adequate plant in place of plant that is not adequate, compared with the cost of building, or relieving parallel units of plant, and a further consideration of the cost of making repairs on deteriorated plant wherever it would be possible, as contrasted with the cost of replacing the deteriorated property, form the basis of the determination of practically all expenditures for plant in a telephone property.

Q. What did you find with respect to the engineering and construction program of the company when you came to Ohio in February, 1923?

A. I found a very large engineering and construction program about to be undertaken. It was going to be necessary to unify the service and consolidate the property in some forty exchanges where at that time there existed dual service. In addition to that——

Q. Well, just a moment; how did that dual service—that is to say, what were the factors which created a dual service; were there two companies?

A. No, sir; previous to the latter part of 1921 there had been two companies in the field. At that time I understand—or at least I did understand at the time I came here, and now I know, that those properties were taken together and formed into a new company and the dual service existed at the time I came here and it was going to be necessary to give a unified service. I believe that was the purpose of the consolidation.

[fol. 2250] Q. For the benefit of the record what were the names of the two companies which were furnishing the dual service prior to September, 1921?

A. The Ohio Bell Telephone Company, I believe, and the Ohio State Telephone Company.

Q. You have referred to the consolidation of the properties and the unification of the service in approximately forty exchanges where the dual services of the two separate companies still existed; where were some of those exchanges located, if you know?

A. Do you want me to name them all, or just a few representative cases?

Mr. McConnaughey: Let him name them all, Karl.

Mr. Burr: I think it would be a very good thing for the record to have them all named.

The Witness: I may repeat myself, and I may leave a few of these out.

There was Cleveland; Columbus; Toledo; Dayton; Springfield; Akron; Youngstown; Canton.

Those were the ten largest properties and represented from the plant standpoint the most of the property.

Zanesville, Lancaster, Massillon, Sandusky, Upper Sandusky, Findlay, Canal Winchester, Miamisburg, Washington C. H. and Grove City.

[fol. 2251] In fact there was dual service in a great many of the Franklin County points here, about a dozen of them. Westerville—practically all of the Franklin County points were dual service.

Barberton and Cuyahoga Falls; that is part of the Akron area now.

And there was dual service at Urichsville.

Mr. Burr: Perhaps it will shorten the inquiry if Mr. Stephens will furnish a list for the record.

The Witness: I have a list, but I do not just happen to have it here. I can furnish it later today or tomorrow.

Mr. Burr: Let it be marked as Stephens Exhibit Number 1 and we offer the same in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Stephens Exhibit Number One.

Mr. McConnaughey: Mr. Stephens, are all of these forty-four points that you have spoken of Ohio State points?

The Witness: No, sir; there was some Springfield and Xenia points.

Mr. McConnaughey: Will you indicate in the list which were Ohio State and which were other than Ohio State?

The Witness: Yes, sir.

By Mr. Burr:

Q. That is to say wherever there was a consolidation and unification of service which does not involve Ohio Bell [fol. 2252] and Ohio State properties, you will indicate the properties consolidated by names?

A. Yes, sir.

Q. By the name of the previously owning company?

A. Yes, sir.

Q. Proceed.

A. In addition to the work of unifying the service, consolidating the properties, there were several thousand delayed applications for service all over the state and it was going to be necessary to engineer and construct new property to provide telephone service.

Now in connection with this unification and consolidation work and with this construction work to provide telephone service, for new subscribers, I would estimate that we have covered at least 75 per cent and possibly 80 per cent of the entire property in this state.

Q. Do you mean by that that 75 to 80 per cent of the property of the company has been reconstructed in this state under your supervision?

A. That is it exactly; that is, it has been considered for reconstruction. We did not build 75 per cent of the property new, but in consideration with what we did and the particular areas where we placed this property, we had to

rearrange and work over at least 75 per cent of the property in the state.

Q. What sort of engineering and construction problems were presented by the unification work?

A. There were very many fine engineering and construction problems presented. It was necessary to inspect and determine the condition of all of the property that existed in order to determine its condition and to finally deter- [fol. 2253] mine what part of the property would be economical to leave in service.

I made such an inspection of all of the property during the first two years that I was here in connection with my regular job as general plant superintendent.

Q. In connection with that work of consolidation and unification, what rearrangement if any was made in any of the keyboards of the exchanges of the company, as reflecting upon the amount of work involved in the consolidation and unification work?

A. Much of the equipment of the two companies was of different circuit design. It was necessary to engineer and to remodel a great many of the circuits in all of the switchboards in order to make them work in conjunction one with the other.

Many of the keyboards were either completely replaced or completely rewired in order to provide different ringing conditions.

Many of the substations had to be either replaced or rewired on the job to take care of the ringing conditions.

New trunk circuits had to be designed and put into place.

In order to take care of the additional business on the remaining switchboards, in some cases a large number of additional sections had to be placed and the loads had to be changed which, in many cases, required the shifting of the entire loads in the central offices.

And in order to do that and in connection with it there was an inspection made to determine the condition of all of the [fol. 2254] property before the work was proceeded with.

Q. Have you inspected the plant and property of The Ohio Bell Telephone Company during your connection with the company since 1923, in order to determine the deterioration if any of the various classes of plant, and also of their per cent condition?

A. I have.

Q. What do you mean by the term "deterioration"?

A. Deterioration is the cause, or effect upon the physical property or physical condition of the property, due to use and exposure to which that property has been subjected.

Q. What do you mean by the term "per cent condition of the property"?

A. Per cent condition of the property is a percentage or value or cost remaining after deducting from any given item, or from the value new—the value or cost new, of any given item of plant, the per cent that represents the deterioration in the property.

Q. Tell the Commission of some of your work for the company which brought to your attention the per cent condition of the property prior to the year 1925.

A. In connection with familiarizing myself with this property after I came here in 1923, I estimate that I travelled at least ten thousand miles going from one exchange to another, and over our toll lines. I was almost continuously on the road the first year; I was out looking over this property in order to determine what had to be done.

Now that ten thousand miles was only at the rate of one hundred miles. As a matter of fact I probably travelled twice that much, as I was going almost continuously.

[fol. 2255] Q. In connection with the particular work of determining the per cent condition of the property for the purposes of this proceeding how many miles did you travel, if you know?

A. I traveled something over 6000 miles.

Q. During what year?

A. During the year 1925.

Q. And what did you do during that inspection?

A. Well, that six thousand miles was traveled in going to our various small exchanges and over the toll property. And in connection with the trips taken during the year 1925 I inspected practically all of the toll property and all of the exchange property—small places. I estimate that that took me altogether a period of about eight weeks including some Sundays I was out.

Q. In addition to that, what inspection of the larger exchanges did you make in 1925 from time to time?

A. I inspected all of the larger exchanges at various intervals. On account of the large construction program in

1925 my duties required my presence in all of the large cities, and the determination of the per cent condition of this property required my presence there also and I combined, to a considerable extent, the two jobs.

In all of my work out on the property I always had in mind a determination of the per cent condition of the property for the purposes of this case.

I believe that outside of the time spent inspecting the property at Cleveland that probably two months would be a fair estimate of the actual time spent on the larger exchanges except Cleveland.

[fol. 2256] Q. Why do you except Cleveland?

A. Because I was located at Cleveland and we had a very large construction program there for 1925, and I spent quite a bit of my time throughout the year looking over that property. And incidentally from a value standpoint, it is one of our largest properties—it is the largest property.

Q. You say that your office is in Cleveland?

A. Yes.

Q. Do you remember how many times in 1926 you inspected parts of the Columbus Exchange and the surrounding property?

A. I was in Columbus about 15 times last year, and on each and every one of those occasions I inspected part of the property, not only in Columbus but in Franklin County, that is property adjacent to Columbus.

I might say that in Toledo I was there oftener than I was in Columbus on account of the character of the program that we have there.

I visited Dayton six or seven times.

I visited Youngstown and Akron six or seven times.

Q. What about Canton?

A. Canton probably ten or twelve times, because we have a terrifically large program on there. In connection with the Canton job we are building a new building and putting in new central office equipment. And we reblocked all of the downtown area, some ninety blocks.

Q. Are you speaking now of the interior block wire?

A. Cable and wires, yes, sir.

Q. By "reblocking" you mean rearranging——

[fol. 2257] A. Well we put in new in that case because in Canton the property had been fed from poles in the rear of the buildings, and we put in new block cables, and in

connection with the preparation for the cut over from our two existing exchange buildings there to the new building, we pulled in a great amount of underground conduit and put up a great amount of aerial cable to take care of the new business we expect to get in Canton. And in connection with that program I was there ten or twelve times.

It would take a great deal of time for me to tell the Commission all the things I did at these times. But my estimate of the total time spent on a determination of per cent condition was about two months outside of Cleveland, and outside of the eight weeks that I spent going over the toll property and the small exchanges.

Q. Where you said in your previous answer that you "pulled in underground conduit" did you mean underground cable?

A. I meant underground cable; yes, sir.

Q. In passing you might state something of the size of the construction program in Canton in dollars.

A. Well I don't know that; I have forgotten, just the figures, but we are putting up a new building there costing approximately two hundred and fifty thousand dollars, and if I am wrong Mr. Cooper will correct me.

Mr. Charles P. Cooper: You are too low.

The Witness: But the work this year is far in excess of a million dollars—a million and a half dollars; I know that; and probably the total program there will cost in excess [fol. 2258] of two and a half million dollars. The exact figures I have not got, but I know it is in that proportion. I can itemize some of the details, but not correctly.

Q. To what extent did you inspect the toll lines of the company in 1925?

A. I travelled over and inspected all of the toll lines of this property with the exception of a few in the southeastern and southern part of the State, where the roads were impassable, and then a few other lines of very little importance, and it happens that I had inspected them before and I knew their condition.

I think that I—I know I inspected all of the toll property in 1925 with the possible exception of two or three hundred miles.

Q. What was your purpose in making such a complete inspection of the property of the company in the year 1925?

A. Well in addition to the knowledge I had had of this property and the inspections I had made in connection with my other work, having in mind at all times the determination of the per cent condition of this property, I thought it advisable for the purposes of this case to make an inspection having in mind only the determination of the per cent condition of the property for the purpose of this case.

Q. How many exchanges did you visit in connection with that inspection?

A. I visited and inspected property in all of the exchanges owned by the Ohio Bell Telephone Company in Ohio.

Q. How many exchanges are there?

[fol. 2259] A. One hundred thirty six, I believe. I have a list of them here. I may have made a mistake in the total, but approximately 136 exchanges.

Q. Have you a map showing the exchanges visited and the property inspected by you in 1925?

A. I have (producing same).

Mr. Burr: It may be marked for identification as Stephens Exhibit Number Two, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of-The Ohio Bell Telephone Company and is herewith submitted and marked Stephens Exhibit Number Two.

Q. It has been suggested, Mr. Stephens, that I ask you whether or not all of the travelling over the property which you have done since February, 1923, has been in the State of Ohio, and whether or not your inspection has been an inspection of property in the Ohio Bell Telephone Company.

A. As far as I have testified to, yes, sir. Incidentally I have inspected other properties outside of the state during that period in connection with my work, but not included in any that I have told here.

Q. That is to say, your testimony with respect to the inspection of the property made between February, 1923, and the present time including the year 1925, has relation to your inspection of the property of the Ohio Bell Telephone Company and the property is all located in Ohio.

A. Yes, sir.

Q. Have you also a map showing the toll routes covered [fol. 2260] by your inspection, made in 1925?

A. I have (producing same).

Mr. Burr: It may be marked for identification as Stephens Exhibit Number Three, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Stephens Exhibit Number 3.

Q. I think you stated in your previous testimony that you inspected the property in practically all of the exchanges of the company?

A. Yes, sir.

Q. Does your Exhibit Number 2 list all of the exchanges of the company?

A. To the best of my knowledge it does. I know that I visited and inspected the property in every exchange, and if there has been any omitted off of that map it was my own fault in making up that record.

Q. Now with respect to your exhibit number 3, how have you designated on it the toll lines of the company inspected and those not inspected?

A. The part marked in red are the lines that I traveled over and inspected in connection with my trip in 1925. The lines shown in black that have not been covered by red are the lines which I did not inspect during 1925.

All of the lines with the exception of some of these down in Southeastern and southern part of the state I had previously inspected and knew the condition of. The property [fol. 2261] down here I could not get over at the time, and I never have seen it. It doesn't amount to a whole lot.

Q. What is the total toll pole line mileage of the company in Ohio, if you know?

A. I can give you that mileage as of the end of the year.

Q. That is all right.

A. It would be indicative——

Q. That is as of the end of 1925?

A. Yes, sir; I just happen to have one of those reports here with me. It was 6857.06 miles.

Q. That is miles of toll pole line?

A. Yes, sir.

Q. Who if anyone accompanied you on the inspections made in 1925?

A. I was accompanied at all times by the Division Plant Superintendent and other plant supervisors who had direct charge of the property then under inspection by me.

Q. What was your purpose in doing that?

A. I wanted to have full advantage of their knowledge of the property gained over a long period of association with it; more particularly to have them point out to me property that belonged to The Ohio Bell Telephone Company, and particularly that property that was jointly owned with other companies.

Q. To what extent did you visit the buildings of the company for the purpose of inspection during 1925?

A. To the best of my knowledge I visited every building owned by the company that was included in Mr. Myers' Exhibit. There was one building I missed at Crestline. I was down there twice and could not find it, but that was my fault, I think.

[fol. 2262] Q. With respect to the construction program for Cleveland and its vicinity for the year 1925, what amount, approximately, was involved in that program?

A. Approximately $3,700,000.

Q. What proportion of the Ohio Bell Telephone Company's property is located in the Cleveland district?

A. Over 35 per cent of the entire exchange property in the state.

Q. Taking up some of the various classes of plant- inspected by you in 1925, will you first consider the matters of buildings; briefly how was your inspection made?

A. I went to the property, and inspected every portion of it; the foundation, the outside and inside walls, the roof, the glazing, the plumbing work, heating plants, paint; in fact all items that went into the buildings.

Q. What plan did you follow with respect to the inspection of central office telephone equipment?

A. I inspected the central office equipment at each exchange—each building. I inspected it for deterioration brought about by rot, rust, decay and other items that enter into and cause depreciation. I examined the iron work of the frames and particularly the paint, for rust. I examined the blocks on the fram-s for items of deterioration; the cross connecting wires; the cables from the

main to the intermediate frames and from the intermediate frames to the switchboards; I examined the switchboards themselves, the woodwork, the finish and other items of [fol. 2263] deterio-ation; I examined the keyboards, the keyboard wiring, the answering jacks, the multiple jacks, the cords; in fact all of the property or all of the plant located in the switchboards themselves.

I examined in addition the relays, both for the subscribers' line circuits and the trunk circuits.

I examined in detail for deterioration the power equipment, the fuse panels, the batteries.

Q. How did you arrive at the condition of the batteries?

A. The batteries have positive and negative plates in them and after they have been in use a while the active material starts to drop off of the positive plates.

Also the negative plates become what we call sulphated.

The active material from the positive plates drops down in the bottom and forms an accumulation in the bottom of the glass or lead tank containers. The plates themselves warp, particularly if the batteries have been charged and discharged too rapidly.

It is also necessary to look at the records maintained in the office to determine the length of time that it takes to charge the batteries and to study the length of time the battery holds its charge.

You have to take into consideration all of those elements that I have named in a determination of the per cent condition of the batteries, and I inspected the batteries with those elements in mind to determine the per cent condition of the property.

Q. In order to shorten the testimony as much as possible [fol. 2264] I would like to have you understand that when I ask you with respect to your inspection of any class of plant, that your answer will apply to all of that class of plant generally, wherever you inspected it, unless you single out separate instances which do not apply to the general subject.

A. Yes, sir.

Q. Briefly then, what inspection or examination did you make of the other equipment of central offices?

A. I examined the school equipment at every point where it was located; the chairs, the tables in the central offices, the kitchen equipment and so forth; I examined them all.

In fact the school boards are somewhat identical with the equipment in the central office, and I examined those for all of the items mentioned in my testimony on the examination of the central office equipment.

I have examined the other items for rust, rot, decay and so forth, and breakage.

Q. How did you go about the inspection of station apparatus and station installations?

A. I examined a number of substations, more particularly on business premises.

I combined partly my inspection of substation apparatus and installations with the inspection of private branch exchanges.

I confined my inspection of the plant almost wholly to business premises on account of the difficulty of going out and examining individual telephones in residence property. And I examined the substations; the base of the sub- [fol. 2265] station for any deterioration in the stand itself.

I examined some switch hooks, springs, mouthpieces; in fact the whole general finish.

I examined the cords for cut-outs and frayed condition that might cause—or that were elements to be taken into consideration, in determining the per cent condition.

Now in addition I inspected thousands of substations that had at that time been very recently removed from the premises of our subscribers in connection with the everyday removal and installation of telephones.

Last year we installed I guess, roughly, 140,000 telephones, and we possibly took out 110,000 telephones, or moved them around, and a great deal of that apparatus, on removal goes in to the Western Electric Company to be looked over and gone over and tested and inspected. I made use of that, and inspected a great deal of the apparatus that was returned.

I believe—in fact I know from my experience that that apparatus that I inspected was not in as good condition as it is on the subscribers' premises, because a great deal of the deterioration that is brought into those sets is brought in from the time it is removed from the subscribers' premises until it is delivered to the Western Electric Company for repairs.

Q. And yet do you take into consideration those removed

sets in determining the per cent condition for that class of property?

A. I based my determination on my inspection of the [fol. 2266] condition found at the subscribers' premises, but it was a great help in determining for me the probable condition which the sets that I had not inspected, were in. I did give some consideration to that point.

Q. What in your judgment would have been the effect on the per cent condition which you placed upon station installations, and to which you will testify later, had you taken into consideration in addition to the station installations in business houses, the station installations in private residences generally throughout the system.

A. I believe that it would have resulted in my finding a higher per cent condition of the property than I did, because it has been my experience that the very hardest wear and tear on our substation property occurs on business premises.

Q. Briefly, what did you do with respect to inspecting the exchange pole lines and associated items?

Mr. Postle: May I ask a question before you come to that?

Mr. Burr: Yes.

Mr. Postle: Was this minute inspection which you have detailed as to central office equipment made by you personally or was that entrusted to a subordinate?

The Witness: I made all the inspections to which I am testifying personally. I previously testified that the men in charge of the particular property that I was inspecting were present at all times when I was making that inspection. [fol. 2267] Mr. Postle: I so understood.

By Mr. Burr:

Q. To go back to the former question, what did you do with respect to inspecting pole lines and associated items?

Commissioner Poor: That is a good time to recess until 1:30 P.M.

And thereupon a recess was taken until 1:30 o'clock P.M. of same day.

[fol. 2268] Afternoon Session

Thursday, January 28th, 1926.

And also F. M. STEPHENS, resuming the stand for further examination in chief, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

(And thereupon the pending question was read as follows:

"To go back to the former question, what did you do with respect to inspecting exchange pole lines and associated items?")

A. I inspected the pole lines for butt rot, hollow rot, shell rot, cracks, splits, upper parts of the poles; in fact, I considered all of the items bearing on the amount of deterioration in the pole property.

In connection with that inspection wherever I felt that it was necessary to further determine the per cent condition that could not be determined from the ground, I climbed some of the poles, and that was particularly in connection with the determination of the condition of terminals and associated equipment.

Q. To what extent were the butts of the poles exposed for your inspection?

A. Well, a great number of poles in the plant have been exposed due to road improvements, the making of sidewalks and the paving of alleys, and, on the toll property, the mak-[fol. 2269] ing of roadways and the constant ditching; and, in addition to that, I had some poles exposed for my inspection.

Q. With respect to the poles which you said had been exposed as the result of road improvements, sidewalk improvements and kindred improvements, did you see any such poles exposed during the course of your actual inspection?

A. Yes, I did, many of them. That permitted me to inspect for deterioration that usually occurs from six to eight inches below the ground line. That is really the real point of deterioration in pole property.

Q. In connection with your ascertainment of the per cent condition of the poles, what consideration, if any, did you give to the so-called sound wood areas for given heights and classes of poles?

A. I considered the remaining areas of sound wood as compared to the original areas in respect to particular poles and all the poles inspected, and that aided me in my determination of the per cent condition of those poles.

Q. To what extent did you inspect crossarms in connection with your pole inspection?

A. I inspected the crossarms for items of deterioration. We have many creosoted arms in our plant, and the first evidence of deterioration is the color; the creosote itself bleaches out of the crossarm. Then there is further weathering and the grain of the wood stands out. After that you begin to possibly get a little rot around the holes that the pins are in. And then we have further rotting at that point. [fol. 2270] And, later, the crossarm pins begin to pull out; the arms crack and split off.

I am just reciting that to show the progressive action of deterioration on plant of that character, and how it can be recognized.

Q. What have you to say about the inspection of anchors and guys?

A. They were inspected in connection with my inspection of the pole lines. They are very easy to inspect except that portion which is buried underneath the ground. I inspected for breaking of the galvanizing, a very common element of deterioration, particularly at the hooks or the eyes of the rod.

I inspected for electrolysis of the rod itself at the ground line. In fact, I inspected for all elements of deterioration of the guys.

Q. Did you make the same kind of inspection in general of the minor items associated with poles, such as pole steps, brackets, butt steps, guards and kindred items?

A. I did.

Q. How did you inspect the exchange aerial cable?

A. I inspected large quantities of aerial cable both in the air and on the ground. In connection with the cable that was on the ground it was cable that was in the course of being removed. It was cable that, part of which, I had inspected to determine the per cent condition or the amount of the deterioration prior to the time it had been removed. Of course the inspection that I made when it was on the ground, a foot by foot inspection, permitted me to verify the de- [fol. 2271] termination that I had previously made.

Q. Was this removal that you refer to on account of excessive deterioration or for some other reason?

A. There was very little on account of deterioration. It was primarily in connection with the unification of our property and the replacing of other inadequate cable plant.

Q. What did this closer foot by foot inspection that you were able to make on the ground disclose with respect to the per cent condition of the cable as compared with the per cent condition of it which you arrived at while the cable was still in the air?

A. Well, of course the inspection that I made on the ground was partially to help me in my determination, and I found that the condition of that property was about the same as I had previously determined when it was in the air.

Q. What were some of the elements which you took into consideration in your examination of the exchange aerial cable?

A. Well, first, I consulted the exchange records in regard to bad pairs and gave consideration to that item.

I inspected for pure lead sheath which showed crystallization. I inspected for dents and cracks, hanger cuts, ring cuts, which is the same thing, and electrical burns at the rings.

I inspected the messengers for rust and other deterioration; breaking of the galvanization, and I inspected the cable hangers themselves.

Q. What consideration, if any, did you give to the number of trouble splices found during your inspection of the cable? [fol. 2272] A. I gave consideration to that; that is an indication of past trouble; but if there are not too many of them it just represents repair of past damage and is really not an indication of deterioration existing at the time of the inspection.

Q. What do bad pairs in a cable mean? Do they mean that the cable is irrevocably deteriorated to the extent of the number of bad pairs in it?

A. Oh, no, not at all. Under our system of clearing trouble, on every working pair that gets in trouble in the cable itself, it is tested and the location of the actual trouble determined by electrical measurement. We keep that record. If there are any other good pairs in the cable that can be used, we just switch that service over from the bad to the good pair, keeping a record of the measurement, and later

when that pair is required for service, or when several pairs have gone bad at one location, and we see that we probably are going to have additional trouble there, if we do not clear it, we go out, and in the course of ordinary repair and upkeep we reclaim those pairs, and it does not mean at all that the number of bad pairs found in a cable at any particular time are taken as a measurement of the per cent condition of that cable. It is just one of the factors to be considered.

Q. What inspection, if any, did you make of the exchange aerial wire?

A. I inspected the exchange aerial wire, the three classes of wire, the iron, the copper and the insulated wire. The copper wire I inspected for corrosion and pitting. I in- [fol. 2273] spected it for burns at the ties; that is, tie wires at the crossarms.

Q. By the way, how does it come that the wire is burned sometimes at the ties? You referred to that twice I think.

A. Well, that is primarily due to the wires breaking during the course of—trees falling through them or sleet storms or something like that, where the tension on the wire—when it is relieved at the break it pulls in one direction away from the break and in pulling through the ties at the insulator the wires are very often badly scored, and at a later date it may develop trouble at that point.

Q. Are they scored by the heat which is generated by reason of their being pulled through?

A. Well, I never had my hand on one of those things when it happened; I don't know that. But I think it is more the effect of pulling one body over the other, the scraping, the reduction of area and the breaking particularly of the hard outer surface on hard drawn copper wire.

Mr. Dotson: May I ask a question?

Mr. Burr: Yes.

Mr. Dotson: I do not believe you have stated yet the manner in which you made your aerial inspection; that is, an inspection of your aerial equipment, wire and cable. Could you in any degree of brevity state how that was done?

The Witness: Well, I covered the plant——

Mr. Dotson: You have stated what your inspection was for and in what particulars you inspected it, for certain conditions which you have mentioned. Now what I want to

[fol. 2274] know is the manner in which you made that inspection?

The Witness: As to whether I was walking or riding?

Mr. Dotson: Well, whatever method you pursued, whatever you did or what effort you employed in ascertaining the facts that you said you were after?

The Witness: Well, I did this, Mr. Dotson; I inspected representative items, sections of plant here and there, trying to get a cross-section picture, and then tried to look over as much of all of the property as I could, to see that it was in the same condition as the condition of the property that I had more minutely inspected.

Mr. Dotson: In doing that did you climb a pole to inspect any of the wires and cables that were swung on the poles?

The Witness: I climbed some poles, yes, sir, wherever I thought it was necessary. But, as a matter of fact, after you have had a long experience in the business in dealing with nothing but property of that sort, you are able to form very accurate conclusions in regard to the condition of the property by inspecting without climbing the poles.

Mr. Dotson: Observing from the ground?

The Witness: Yes, sir, observing the general appearance and condition of the property.

Mr. Dotson: And your inspection, or in this inspection that you made you relied more upon the view you took of the aerial equipment from the ground than you did from [fol. 2275] any actual physical examination?

The Witness: Well, I determined the per cent condition of by far the largest part of the aerial property from the ground than I did by actual climbing. But wherever I thought it was necessary to substantiate what I could determine from the ground I did go up the poles and, as I stated, particularly in connection with terminals and underground boxes, etc.

By Mr. Burr:

Q. In what areas in Ohio do you experience the most marked deterioration in open aerial wire?

A. Well, we have two very bad areas; one of them along the Ohio River from East Liverpool south, particularly down through Steubenville where our aerial wire has been

attacked by the fumes from the manufacturing and steel plants located along the river.

There is another area that is quite bad south from Toledo down in the oil belt, and our copper wire even is attacked there and deteriorated.

Those are items that might be passed up if you don't know the history of the property and the conditions as they exist in making an inspection of this sort for a determination of the per cent condition.

Mr. McConnaughey: Does the oil cause the deterioration in the Lima-Toledo district?

The Witness: Why, I can only testify as to the results. It must be some of the elements in the gas, some acid property or something of the sort that attacks them. We have had quite a little trouble with our toll line from Toledo to [fol. 2276] Columbus here on that account.

Mr. Dotson: You have never taken into consideration that that might result from the carbon monoxide—the gas from automobiles?

The Witness: Well, if we did, we probably, would have it around some of the other parts a little more than we do there.

Mr. Postle: Have you had a similar experience in other oil fields where you have had aerial construction?

The Witness: Not to the extent we have had there. Wherever there is large oil production over a long period of time—and the time element enters into it considerably—many of the oil wells in the Southwestern Company where I was located previous to coming here, two or three years would see the end of it; that oil field would pass out of existence; and there we had but little trouble. It is only in fields like this one I mentioned over a long period of years where we get that effect—the cumulative effect, in other words.

By Mr. Burr:

Q. In your discussion of exchange aerial wire I don't think you said anything with respect to the inspection of drops. To what extent, if any, did you inspect the drops?

A. I inspected the drop wires particularly in regard to insulation.

The drop wire actually remains in service only to the point where its insulation is gone, and first the black im-

pregnated material fades out of the insulation. Then it becomes gray in color. It begins to fray; and then the in-
[fol. 2277] sulation either drops off or is knocked off. At that time the drop has to be replaced with a new one if it still remains in service.

I inspected for all of those things.

Q. Does the same thing apply to twisted pair generally?

A. Yes, sir; wherever you find it, wherever used, for drop or line wire or any other insulated wire.

I might add that whenever that wire is put through trees or is in trees or rubs against any obstruction that the insulation comes off rather fast. For that reason we attempt to keep that class of property free from trees.

Q. What is the most important factor in determining the per cent condition of open iron wire as you have observed it?

A. The breaking of galvanization and the rust that develops shortly thereafter.

Q. In what way did you inspect the exchange underground conduit?

A. I inspected the manholes for cracks in the covers; wear and tear on the frames due to vehicles riding over them; cracks in the walls; washing out of concrete mortar between the bricks where there is water in the holes; deterioration of the ironwork in the manholes.

I also examined the duct entrances. That is about the only place that normally you have an opportunity of inspecting the underground conduit except that I did try to take advantage of some of the places that existed during the course of my inspection where the conduit was exposed for one reason or another.

Q. Where did you examine exposed conduit in the year
[fol. 2278] 1925?

A. I examined exposed conduit at Canton. This last year in Canton there was considerable street improvement under way, the putting in of sewers, etc., and some buildings going up. And I think in a half dozen different locations during the year I had an opportunity to examine conduit; and then again in Cleveland at three locations; one at 55th and Carnegie where we removed an old run of conduit; and out on Euclid in connection with the street improvement there was some 2300 feet of conduit that was exposed to view and I inspected that.

Q. That is the second case?

A. That is the second case. And the third case was the conduit that was removed in the course of the construction and closing of the streets and the construction of the new Union Station. There was considerable conduit exposed there.

Q. In what parts of the property of the company, that is to say, in what locations, did you inspect manholes?

A. I inspected manholes at various locations. I inspected those close to the central offices, or the central office manholes. The reason I inspected those particularly was on account of the large number of underground cables that were through those particular holes that I inspected at that time.

I inspected the more important junction holes, taken at random throughout the property.

Q. Let me interrupt your discussion of the different classes of plant inspected with this question, if you please; how does the general per cent condition of the total property of your company in Ohio today compare with its per [fol. 2279] cent condition at any time during 1923, 1924 and 1925, if you know?

A. It has been greatly improved during that period.

Q. During what period?

A. During the period mentioned, from 1923 to 1925. In fact, it is getting better every day—every month.

Q. Well, what is its condition today as compared to any of those other years?

A. It is better.

Q. Why is that?

A. Due to the fact that we are constructing new property at a considerably greater rate than, in my judgment, the deterioration takes place in the existing property.

Q. How do you know that, or on what do you base your judgment in that respect?

A. Well, as testified to this morning, the gross addition to the property from 1923 to 1925 inclusive, not including purchases of going property, amounted to approximately $37,700,000.00, which is at the rate of approximately 12 per cent per year, and I am positive that the deterioration is not growing at that rapid a percentage.

Furthermore, during the course of my inspection it was very easy to determine as I went along that the condition of the property was getting better.

Mr. McConnaughey: It was part of your job to see that it did not get any worse, wasn't it?

The Witness: I should hope so. That is a good question to ask, and that is all right.

By Mr. Burr:

Q. Have you any further reason for believing that the [fol. 2280] per cent condition today is higher than in any of the previous years?

A. Yes, sir; as testified before, we took out of the plant, including the sales of property, approximately $19,000,000.00, and as a general thing that represented the older parts and portions of the property.

Q. Approximately how much of the present property of the Company has been installed within the last four and a half years, if you know?

A. I have that for four and a quarter years; that is since the formation of the existing company.

Q. That will do.

A. About 45 per cent of the total property.

Mr. McConnaughey: How do you get that per cent; what is the new compared with?

The Witness: With the total value of the property of today.

Mr. McConnaughey: This reproduction value that has been put in here?

The Witness: No, sir.

Mr. McConnaughey: Book value?

The Witness: The physical property as represented on our books.

Mr. McConnaughey: The book value?

The Witness: Yes, sir.

Mr. McConnaughey: Of course it is book value both ways.

The Witness: Yes, sir, absolutely. It is a direct com- [fol. 2281] parison.

Mr. McConnaughey: And if there is any difference in prices it would affect the percentage if you considered it as a per cent on the physical plant?

The Witness: Oh, yes, the per cent of the plant would be less than that in direct proportion to the difference in prices of the different properties built over a period of years.

By Mr. Burr:

Q. I think you made some reference in your previous testimony to the examination of electrolysis records. Explain more in detail, if you please, those records, and what purpose they served in connection with your determination of the per cent condition of the underground cable.

A. Electrolytic action occurs through stray currents from street railways and other direct current users that come onto our cables, and, at various points throughout the runs of the underground cables, leave the cable sheath. At every point it leaves the cable sheath it takes some of the lead with it. That occurs in manholes, and where it does you can inspect for it.

Any one who is familiar with cable plant can see the result of electrolysis. There is a certain pitting and crumbling of the cable sheath; something like the effect of nitric acid poured on lead. It also occurs in the conduit runs themselves, particularly where the conduit is built close to water pipes or other foreign structures of current carrying capacity in the streets. And the only way to get at the amount, or try to get a picture of what that has resulted in, [fol. 2282] is to look into the past records of the electrolytic surveys made by the Company's engineers to determine where that has taken place and where it is now existing and treat that in connection with the determination of the condition of the underground cables.

Q. Going back again to the matter of the cables which you saw pulled out of the ducts, what inspection did you make of that cable? How did the results of your inspection compare with the per cent condition which you had already considered as applicable to the cable in the ducts?

A. Well, I inspected these underground cables of course in the manholes. I could not inspect them where they were in the ducts. I inspected them for the effects of electrolysis, as I have previously described. I inspected them for breaks at the duct entrances, the point at which breaks very often occur. I inspected for dents, cracks and all other items of deterioration.

Now, inasmuch as it is impossible to inspect the cable that is in the conduit, and as easily 90 per cent or more of the total underground cable is in the conduit, I availed myself of the opportunity of inspecting portions of the underground cable that was being removed in connection

with our unification projects, much of which is right here in Columbus; and I inspected that cable, parts of it, both before and after it was removed, and considered what I found there in the determination of my per cent condition.

Q. Did you have any opportunity to inspect exchange submarine cable, and, if so, with what result?

[fol. 2283] A. We have a very small quantity of that, but I did inspect the submarine cable and it happened in connection with trouble that we have. We have a piece of submarine cable at Cleveland across the Cuyahoga River that was pulled up last year by a boat and it was damaged and we had to pull it up and make repairs.

Q. Did you inspect that?

A. I did. Also we have a piece of submarine cable across from Sandusky to Cedar Point, and last year somebody cut about ten or fifteen feet right out of it right at the opening of the season, and I happened to be in Sandusky and I went over and looked at it when they repaired it.

Q. In the appraisal there is also an item for buried cable, which I believe is located at Thornville, Ohio. What if anything did you do in connection with inspecting that cable?

A. Well, I talked to the man that had been there five years in regard to the trouble he had had on it. It is something that is pretty hard to inspect, and I actually went out and dug up a little of it just for two reasons; one reason was, I had never inspected a plant of that character before and I wanted to find out how they had brought that out of the ground and up the poles and what the action was. There is considerable thought given among some companies now in regard to the burying of cable and the effect of it, and while there isn't very much of the total plant represented by the Thornville cable, I examined what portion of it I was able to see.

Q. How, if at all, did your inspection of the toll pole lines [fol. 2284] differ from the inspection of exchange pole lines?

A. None; the two inspections were identical.

Q. Is there any difference between your method of inspection of toll aerial cable and your exchange aerial cable?

A. Except in the case of the toll aerial cable I examined none of it on the ground; it was all up in the air.

Mr. Dotson: May I ask a question? In your inspection

of the aerial wire and cable, did you note with reference to the effect of electrolysis, what the conditions were with reference to the possibility of some portion being exposed more to electrolysis than others?

The Witness: Oh, yes, that is a fact; as a matter of fact, we have certain areas in our large towns, due to particular local conditions, lack of bonding of street railway rails and other conditions of like nature, that make some of our conditions in certain locations more troublesome than others; like in Detroit, we have two or three places there where we have had some electroylsis where we have had to guard against the conditions; where we have put in special bonding wires to go back to the negative buss bars of the power company.

We know how to take care of it as soon as we find it, and through cooperating with the electric companies, the street railway companies particularly, we clear it up. It is just a matter of being constantly on the alert to catch it before it does damage.

Mr. Dotson: Well, in speaking of Toledo, is it true that in Toledo the Telephone Company and the Power or [fol. 2285] the Lighting Company have the combined use of certain poles and pole lines in the city?

The Witness: Yes, sir; we are occupying, Mr. Dotson, I think as you know, certain lines, but not to the same general extent as we do in all of the other communities of the State in which we operate.

Mr. Dotson: Well, then that is more peculiarly true in Toledo than any other city, is it?

The Witness: Yes. We have tried to rectify that peculiarity but we have not been able to.

Mr. Dotson: Is that because the electric department of the City of Toledo favors the joint use?

The Witness: They do not favor the joint use.

Mr. Dotson: I rather had the impression that they did.

The Witness: No, sir. That is not according to my understanding of it. You and I might talk that over at some time, in connection with it.

Mr. Dotson: I will be glad to talk it over and to give consideration to it. But the joint use of the poles as we find it in Toledo creates a condition there that affects or deteriorates the property of the Telephone Company, does it not?

The Witness: No, sir; not at all. As a matter of fact the Telephone Company for many and various reasons would like to go joint with the Electric Light Company. To begin with, it cuts the cost of the building of the property to both companies. We get rid in many cases of one line of poles [fol. 2286] where we have two, and one line would do. We feel that that would help us to maintain some of our plant aerially instead of going to the more expensive underground construction when the people want certain streets cleared of poles. And there are many reasons why we would like to be joint. And we have never found any bad effects as a result of joint construction when it has been properly constructed, particularly under the Ohio Code governing that matter.

By Mr. Burr:

Q. Your inspection of toll aerial wire was made in the same general manner as in the case of exchange aerial wire, was it not?

A. Yes, sir.

Q. Are there any particulars in which your inspection of the two different kinds of aerial wire were different?

A. Well, except a consideration of the number of trouble sleeves, etc., in your toll aerial is an indication of the amount of deterioration in that wire.

Q. Did you take that into consideration?

A. Yes, sir, I did.

Q. What inspection did you make of toll underground cable, of which there is not very much in the plant?

A. The same inspection that was made of the exchange underground cables, except that there again I saw no toll cable that had been removed from plant.

Q. Did you inspect the toll submarine cable?

A. There isn't very much of that. Most of the toll submarine cable is on the Cleveland-Toledo toll cable, and the only part of that to be inspected was practically where it went down the pole. I did inspect that in one or two places [fol. 2287] in connection with the inspection of the toll cable.

Q. Station apparatus and station installations you have already discussed, a little bit out of their order, it is true, but they have already been covered by your testimony?

A. Yes.

Q. Calling your attention then to the item of interior block wires, will you first define briefly what is meant by the term interior block wire?

A. Certain of our distributing plant cables are on the streets and alleys; other cable plant is within the buildings themselves, or on the backs, the back wall of buildings. Terminals are located there. When we have this block cable distribution such as we have in all of our larger cities in the downtown areas, the wire that runs from the terminal location on the outside of the building until it enters the inside of the building is termed an interior block wire.

Q. What is the character of that interior block wire, as a rule?

A. Twisted pair.

Q. What examination, if any, did you make of the interior block wire of the Company in 1925?

A. I probably examined more of that property on a percentage basis than any other one item because of the fact that we had under way the reconstruction of the down-town properties in Youngstown, Canton, considerable in Akron, considerable in Columbus in respect to the clearing of Pearl Alley, although I do believe that came most of it in 1924 in Columbus; and in Toledo we have completed, or have under way, the reblocking of practically all of the down-town blocks, some 110 in total. And in connection with the en- [fol. 2288] gineering of constructing of work I walked around and covered practically the entire property both before the construction started, during the course of construction and much of it since the new work has been put in.

Q. What factors did you take into consideration in determining the per cent condition of the interior block wire?

A. Interior block wire being duplex twisted pair insulated wire suffers there the same as it does when it is used for drop wires, and, in addition, you have the insulation becoming damaged where it runs through the rings and attached to knobs and tied in probably to the same extent or greater than you find in the drop wire, and, in addition, the icicles in the winter time that hang all over that wire deteriorate it to a considerable extent, or is apt to. I inspected for that deterioration.

Q. Going back to the matter of exchange poles and wire,

what examination if any did you make of the rural poles and wires in the system?

A. I examined a large number of rural pole lines, the wire on it, and I found that the condition of that part of our property was less than the condition of the respective items in our exchanges, and it was one of the things that had considerable to do with the rather low per cent condition that I found finally on those two items of property.

Q. What inspection did you make of P. B. X.'s? You have already referred to that generally, but how did you go about the business of inspecting the P. B. X.'s themselves?

[fol. 2289] A. As I stated before in regard to my testimony on the substation equipment itself, I inspected a number of private branch exchanges on business premises, some at hotels and clubs.

The private branch exchange equipment is essentially identical with the central office equipment, and my testimony on the method of inspection in regard to central office equipment will apply to the method followed in inspecting private branch exchanges.

In addition to that, in connection with our unification programs there were hundreds and hundreds of private branch exchanges removed.

Further, in connection with our program of machine switching at Canton and Toledo, we have been and are now removing hundreds of private branch exchanges in connection with the change out of apparatus in connection with machine switching projects.

I have inspected many of these equipments after they have been removed.

Now the switchboards were not removed on account of their condition at all; they were removed on account of the change in type of apparatus that was made necessary by the installation of machine switching equipment.

Q. Does that apply to anything besides the P. B. X.'s

A. Also substation.

Q. What about switchboards?

A. In connection with the changing out of apparatus?

Q. Yes.

A. We have not reached the point in our installation as [fol. 2290] yet that that property has come out of service.

Q. To what extent have you been replacing switchboards with new machines during the work of unification?

A. On private branch exchanges?

Q. No; I am talking about switchboards. I am away from the private branch exchanges?

A. Central offices, do you mean?

Q. Yes, the central offices?

A. We have not replaced any that I know of except where we have changed the type, which really had nothing to do with the unification of the property.

At Upper Sandusky we have in mind—or we unified up there and put in a No. 9 common battery board because of the number of stations we had in the combined property.

Q. Did you make any inspection of the booths and special fittings?

A. I did. I inspected for finish on the booths, cracked and broken glass, the condition of the electrical fixtures, etc., and I also examined the signs.

Q. With respect to the P. B. X. stations which you say were removed and boards which were removed, with what were they replaced?

A. The boards that were removed in connection with the installation of machine switching central office equipment were replaced with later type boards equipped with dials and specially wired to work with that type of central office apparatus.

Q. Were those boards new ones?

A. The ones we installed were new.

[fol. 2291] Q. Now what about the P. B. X.'s that were installed to take the place of those removed; were they new?

A. Well, that is the item to which I have just referred, the private branch exchanges.

Q. Now then with respect to the booths and special fittings, how did you inspect them? You say that you looked at the switchboards and signs and that sort of thing; did you make any inspection of them for their stability?

A. General condition, yes, sir.

Q. Prior to your inspection what general work had been done on booths and special fittings by your Company, if you know?

A. The commercial department and the plant department in all of our larger cities of the State combined to

make an inspection and a replacement of that part, of the booths and special fittings equipment. The object of that replacement was to make our pay stations more attractive and thereby increase the usage of them.

Q. Did you make any inspection of the office furniture and fixtures?

A. I did.

Q. What did you look for?

A. I looked for deterioration in a desk, the filing cabinets, calculating machines, typewriters, etc., and I inspected a large part of that equipment, because most of it is located in our general offices at Cleveland and in our division offices in our eight larger cities, and it was rather easy to inspect.

I might mention there that practically all of the equipment we now have in use has been purchased in the last five years.

[fol. 2292] Q. What kind of equipment do you refer to?

A. The desks and office furniture and fixtures.

Mr. Postle: Does such inspection generally fall within the line of your duty?

A. I have charge of the maintenance and upkeep. I purchase all of that property and it is in my regular line of duty to know its condition.

Q. What sort of an examination did you make of the general store equipment?

A. That is a minor item located in our store rooms; shelves, etc. In connection with inspecting the property I looked those items over and inspected for deterioration.

Q. Did you inspect the general tools and implements and if so how; and I suggest that you discuss at the same time your inspection of the general stable and garage equipment.

A. I inspected the automobiles of the Company, the bodies on the cars, the tires, the running equipment. I also consulted, in connection with the automobiles, the records of actual operation. In my opinion, while per cent condition is determined by actual inspection in the case of motor equipment, you have to go into the records in order to determine the real condition of that property. I did that in my consideration of the deterioration in the automobile equipment. I examined the machinery and other garage equipment used in the repair of the automobiles. I also

examined the tools, some of which are carried on the wagons, digging tools, etc.

The major portion of our tool account consists of items like carts, trailers used for splicing, or used by splicers in [fol. 2293] connection with their work; that is a large item; also the testing apparatus used in connection with clearing cable trouble and transmission work and work of that character included in those accounts, as well as digging machines and air compressors; I do not mean pole digging machines there. Also concrete mixers, etc.; I inspected those for determination of per cent condition.

Q. Have you prepared an exhibit showing the results of your inspection of the buildings of the Company?

A. I have.

Q. Is that separate and apart from the exhibit which will show the per cent condition of the other classes of plant?

A. It is.

Q. Why did you make a separate exhibit in the case of the buildings?

A. It was an item of property that could be isolated. It was an item that we were having other inspections made of, and for comparative purposes I noted the per cent condition of each one of the buildings inspected, and by applying that per cent condition to the reproduction cost new as arrived at by Mr. Myers, I arrived at the reproduction cost, present condition of each building, and find from those figures a composite over-all reproduction cost, present condition for all of the buildings.

Mr. Burr: The exhibit may be marked Stephens Exhibit No. 4, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone [fol. 2294] Company and is herewith submitted and marked Stephens Exhibit No. 4.

Q. Explain the exhibit by columns, Mr. Stephens.

A. Column No. 1 is a description of each property in order to permit its identity being tied in with Mr. Myers' exhibit covering the reproduction cost new of this same property; like, for instance, the Akron building No. 1, location No. 72 and 76 South High Street, can be identified in Mr. Myers' exhibit.

Q. What is shown by the third column, which is the first column of figures?

A. The reproduction cost new.

Q. What is the source of the figures or amounts shown in that column?

A. That is the reproduction cost new as testified to by Mr. Myers and to which there is an exhibit in the records of this case.

Q. What is represented by the amounts or percents shown under the heading of "Percent condition"?

A. That percent condition is represented by my best judgment.

Q. As to the percent condition of what?

A. Of the reproduction cost new.

Q. Of the buildings listed in the exhibit?

A. Yes, sir.

Q. What is represented by the amounts shown in the last column?

A. That column is obtained by multiplying the reproduction cost new by the percent condition and is the reproduction cost in its present condition of the buildings shown [fol. 2295] in this exhibit.

Q. What is the composite percent condition in your judgment of all of the buildings of the Company arrived at by you as the result of the inspection and examination referred to in your previous testimony?

A. 93.59 percent.

Q. That represents the percent condition of the buildings as of what date?

A. June 30th, 1925.

Q. What does that make the reproduction cost of the buildings in present condition?

A. According to this exhibit it is $7,289,420.00; but for purposes of this case I used 93 percent condition instead of 93.59 percent condition, which will be shown on another exhibit.

Q. Do these figures shown on your exhibit include any construction overhead costs?

A. None.

Mr. McConnaughey: They are the final figures that Mr. Myers put on the buildings?

The Witness: Yes, sir.

Mr. McConnaughey: And where those figures include contractors' profits, they are in?

The Witness: Whatever costs were included by Mr. Myers in his exhibit are included here.

By Mr. Burr:

Q. Have you prepared an exhibit showing the percent condition arrived at by the process of inspection previously detailed in your evidence for the several classes of plant other than buildings?

A. I have.

Mr. Burr: It may be marked for identification as Stephens Exhibit No. 5 and is offered in evidence.

[fol. 2296] And thereupon the Document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Stephens Exhibit No. 5.

Q. The exhibit also shows the percent condition arrived at by you for the buildings, does it not, with the exception that it is herein—that is to say, in Stephens Exhibit No. 5—it is shown at 93 per cent instead of 93.59 percent shown in your Exhibit No. 4?

A. Yes, sir.

Q. Now take up Exhibit No. 5, if you please, and explain briefly what the several columns represent?

A. Column No. 1 shows the classes of plant or of property corresponding to those shown in Williams' appraisal.

Column No. 2, the first column of figures, shows the percent relation of the reproduction cost of each class of property to the total reproduction cost of all of the property as shown by Williams' appraisal.

Column No. 3, which is the second column of figures, represents my best judgment of the percent condition of each class of property shown on the corresponding line of Column 1.

Q. You are now referring to the percents shown under the column headed "Percent condition"?

A. Yes.

Q. Proceed.

A. The fourth column, which is the third column of figures, headed "Equated percent condition", is obtained by multiplying the figure for each class of property in Column 2 by the percent condition figure for each class of prop-

[fol. 2297] erty shown in Column 3.

Q. What, in your judgment, is the composite percent condition of the entire property as of June 30th, 1925?

A. My judgment is that the value of the total property in percent condition is 90.01 per cent, of its reproduction cost new as shown by Williams' appraisal.

Q. You mean at least that much?

A. At least that much.

Q. Discuss, if you please, some of the further factors which you have considered in arriving at the percent condition of the property to which you have just testified?

A. I have considered in my determination of the percent condition of this property other than the deterioration in the plant, the item of inadequacy and the item of obsolescence.

Mr. Dotson: May I ask a question?

Mr. Burr: Yes, certainly.

Mr. Dotson: In determining the percent condition of these buildings, what elements did you consider? Did you take into consideration just the condition of the buildings as such due to the natural wear and tear during the period that the building has been in existence, or did you take into consideration the condition of the building with reference to the use that you are making of it, the practicability of the building for that purpose under the present method of installation and operation of your plant?

The Witness: I gave consideration to the items mentioned by you; I think you are speaking of any inadequacy [fol. 2298] that might be in the building?

Mr. Dotson: Yes, the suitableness of the building and its arrangement.

The Witness: Yes, I considered those items in arriving at my determination.

Mr. Dotson: Well, did you consider those elements or factors as having any material bearing upon the percent condition?

The Witness: None whatever.

By Mr. Burr:

Q. Why?

A. Because I did not find they were existent at the time I made my examination.

Mr. Dotson: Are these buildings then, do you mean to say, built according to present-day plans that would be adopted for the construction of buildings devoted to the use that they are being put to?

The Witness: There has been a great deal of improvement in building construction in the last few years.

Mr. Dotson: In what respect do you mean?

The Witness: In the type of material. We have changed our plans somewhat. There are no two of our buildings, Mr. Dotson, that conform to the same kind of a plan. We build a building to fit the requirements of the equipment that is to be housed in that building. And inasmuch as the buildings where I found them were built to house that equipment, and they are housing that equipment, that is one of the reasons that I found no inadequateness in the building proper. In other words, these buildings were designed for their present use at the time they were designed; there- [fol. 2299] fore they are entirely adequate. That is, it is a result; it is not a reason.

Commissioner Poor: Mr. Stephens, I noticed that you carry your right of way at 100 percent condition; why is there no lessening of the percent condition of your right of way?

The Witness: I consider that to be an item of property that continues, as long as the plant is required for which that right of way was given, and it does not deteriorate along with the deterioration of the plant for which the right of way was given.

Commissioner Poor: Among the elements that go to make up your right of way aren't there some permits to attach to buildings on private ground and items like that?

The Witness: Yes.

Commissioner Poor: And that permission is not a perpetual permit, is it?

The Witness: Not at all.

Commissioner Poor: It would only be as long as the life of that building was there, and if that is one of the elements and that building has been in existence for some time and probably would be torn down tomorrow, wouldn't that element be wiped out?

The Witness: As soon as that building is torn down, as of that date, you would not find the value of that right of way in our property values.

Commissioner Poor: And isn't one of the elements in there the right of way where you have a right of way over [fol. 2300] private property?

The Witness: Yes, sir.

Commissioner Poor: Are those perpetual rights?

The Witness: Not always, no, sir.

Commissioner Poor: Well, wouldn't they be deteriorated to the extent of the life of the permission?

The Witness: I would not consider them so, no, sir.

Commissioner Poor: I just wanted to get your idea.

The Witness: In our right of way there is no money included; nothing for losses in the way of rentals or anything of that sort. It is only rights that we have either purchased or that have been given to us.

Commissioner Poor: Or the cost of obtaining them?

The Witness: Yes, sir, or the cost of obtaining them.

Commissioner Poor: Now if it cost you $50.00 to obtain a right of way over private property for a period of 20 years, you put that in as that right of way at $50.00; now after ten years of that is gone, isn't the value reduced just that much?

The Witness: Why, I take it that the value of the right of way as placed in this case would take care of that factor, and not the item of deterioration in respect to that right of way. The value itself that has been placed on the right of way takes care of the items you speak of. There can be no physical deterioration in a right of way grant that I can see.

[fol. 2301] Commissioner Poor: Proceed.

By Mr. Burr:

Q. Mr. Stephens, if there are no further questions on that subject at this time, let me ask you whether in arriving at the per cent condition which you found for the various classes of plant and for the property as a whole you have given effect to such factors as salvage; also the regular replacement of parts that have lived their life; also the effect of premature replacement with respect to the plant of the Company? You can answer that question by yes or no.

A. Yes, sir.

Q. Will you discuss those factors, if you please, and the extent to which you have given consideration to them in

arriving at your judgment as to the per cent condition of the property?

A. I have prepared a memorandum here.

Q. Well, I won't ask you to read your memorandum; but if you will discuss the subject I think you will be permitted to refer to your memorandum from time to time to refresh your recollection, if you have not a sufficient recollection independently of the memorandum itself.

A. The following are considerations indicating that the physical condition of the average telephone plant should be about 83 per cent——

Mr. Shuler: I object to that.

Q. He objects to your saying "should be".

Mr. Shuler: Well, I object to the answer to the statement.

The Witness: The following are considerations indicating that the physical condition of the average telephone plant [fol. 2302] is about 83 per cent, without considering the effect of net additions of new property. The effect of growth by the addition of any considerable amounts of new property would be expected to raise the level for the growing plant from 83 to 90 per cent.

Q. That is to say, 83 or 90 per cent condition?

A. Yes, per cent condition.

Q. Proceed.

A. We have various items that go into the consideration to arrive at that conclusion. First is the effect of salvage. The salvage of telephone property as junk is in excess of 20 per cent of the reproduction cost new of the property.

Q. How do you know that?

A. Our records show that actually that per cent is about 23 per cent.

Q. Proceed.

A. Therefore you have 20 per cent reproduction value of the property that is not subject to deterioration.

Q. You mean that is a percentage below which the deterioration cannot go?

A. Cannot go.

Q. Very well.

Mr. Ward H. Snook: May I ask a question?

Mr. Burr: Yes.

Mr. Snook: Is this generally the condition or is it particu-

larly with reference to Bell property? Is this statement a general statement or is it particularly with reference to the Ohio Bell property?

The Witness: It would be, Mr. Snook, applied equally well to any property if the property was large enough to [fol. 2303] make it, under all circumstances, an average property.

Mr. Snook: In other words, this is an average property?

The Witness: As applied to the Bell or any other average property.

Mr. Snook: Thank you.

Mr. Dotson: Do you consider property whose condition is less than 20 per cent of any use for service; is it susceptible of any serviceable use?

Mr. Tolles: He said junk.

The Witness: I said junk.

Mr. Dotson: You mean by that that there can be no use made of it?

The Witness: No; that is the lowest value to which—that is the lowest per cent of reproduction cost that the property can sink to, because you can get that much for it as junk.

Mr. Dotson: All kinds of property?

The Witness: All of the property including land, 100 per cent of course, and all of the items that go to make up this physical property.

By Mr. Burr:

Q. That is the average?

A. That is the average, yes, sir.

Q. Now you started out with 20 per cent for junk value; proceed.

A. Now that leaves 80 per cent of the property that is affected by the deterioration.

Now the second item to consider is the effect of regular replacements of parts that have lived their life.

[fol. 2304] As a plant is built and developed the various parts of that plant wear out until in a property like The Ohio Bell Telephone Company you will have come to a period when the parts are being replaced at regular intervals by new plant, and considering that replacement of the average plant alone you would expect to find the plant in about a fifty per cent condition. That is, there would be as

many new poles in the property as there were old poles that had deteriorated to the point of being removed. There are just as many poles one year old as those that had one year more to live.

Q. And so on?

A. And so on. Now calculating again that 20 per cent salvage remains undepreciated you have that 20 per cent of value below which the plant cannot deteriorate and you have 80 per cent of the plant in 50 per cent condition. 40 per cent plus 60 per cent—or 20 per cent plus 40 per cent gives you 60 per cent as the average present condition considering only the effect of salvage and the effect of regular replacement of parts that have lived their lives.

The third item to be considered is the effect of premature replacement. There is always a small percentage, not over ten per cent, of our entire property that is being retired on account of its deterioration. The matter of inadequacy, obsolescence, which is due to public requirements, public improvements, and replacements due to storms and casualties, sleet storms, etc., account for the major portion of all of the replacement of telephone property.

[fol. 2305] It is my judgment and belief, based on the experience I have gained in the tel-*h*pone business and from records that we have, that the average per cent condition of the property at the time it is replaced is 45 per cent.

There would be a part of the property in 100 per cent condition and part of the property in 45 per cent condition.

Considering the matter that I presented above the average of the total property would be somewhere between the 100 per cent condition and the 45 per cent, which represents the per cent condition of the property at the time it is actually removed. This would give you an average per cent condition of 72½ per cent; in other words, there would be as much property above 72½ per cent as there is below 72½ per cent.

Mr. Dotson: Then do you mean to say that property removed is removed on the basis of the average per cent condition of all property?

The Witness: Not at all. The per cent condition of the property at the time it is removed is about 45 per cent; that is my judgment. Now when it comes down to the 45 per cent we do not mean that it is removed; I am not attempting to fix the minimum per cent condition——

Mr. Dotson: Do you mean by 45 per cent as used in your testimony, is that in the aggregate the property that is removed—or that property that is removed in the aggregate represents a per cent condition of 45?

The Witness: That is the minimum for the purposes of [fol. 2306] this computation; that is the very minimum.

Mr. Dotson: Although some of that property may be below that and some may be above it?

The Witness: Yes, sir, certainly; that is the average per cent condition. The 20 per cent salvage undepreciated would be 20 per cent. The effect of the 80 per cent of the property that is subject to deterioration would be 72½ per cent, or 80 per cent times 72½ per cent is 58 per cent, which, added to the 20 per cent for salvage, gives an average per cent condition of 78 per cent.

By Mr. Burr:

Q. Taking into consideration what factors?

A. Taking into consideration the effect of salvage, the effect of the regular replacement of parts that have lived their life, and the effect of premature replacement on account of the items named above.

Now another item for consideration is the effect of repairs and maintenance and upkeep. It is reasonable to suppose that any property that——

Q. Well, what is the fact with respect to The Ohio Bell Telephone Company?

A. The Ohio Bell property, if it was not for the maintenance and upkeep and repair of the various parts of the property, would be in at least five per cent less than the present per cent condition of the property.

Q. What kind of repairs do you refer to?

A. The replacement of short-lived parts, apparatus, cords, plugs, and items that under our accounting are properly charged to our maintenance repair account.

[fol. 2307] Q. And what state of repair are you considering?

A. To bring them up—to bring those parts up to 100 per cent operating condition.

Q. Mr. Stephens, just before our short recess I asked you to discuss the effect of repairs and upkeep. Will you please bring your discussion of that factor down to date and finish with respect to the effect of repairs and upkeep?

A. I brought out that in my judgment the effect of repairs and upkeep in The Ohio Bell Telephone Company has accounted for more than five per cent.

I would like to add that the amount of repair work that we have done in this property has been entirely adequate to keep the property up to a high state of repair from an operating and service standpoint.

Q. Now you started this discussion—that is the discussion of this last subject—with a 78 per cent condition; what effect on the per cent condition has the repairs and upkeep which you are now discussing?

A. Adding that five per cent, which is my judgment of the effect of the maintenance repairs and upkeep, to 78 per cent, would bring the per cent condition to 83 per cent.

Q. What effect has the factor of growth as you have found it to exist in the plant of The Ohio Bell Telephone Company upon the per cent condition of the property?

A. In the per cent condition up to this point I have covered only the items of the effect of salvage, the effect of regular replacement of parts that have lived their life, the effect of premature replacement, and the effect of repairs, [fol. 2308] maintenance and upkeep.

Now, in a plant that is growing, increasing in property, that would further tend to, and does bring up the per cent condition. In other words, if we have 100 poles in 83 per cent condition and we add 10 poles new, the resulting per cent condition of the whole property will be improved, or the per cent condition increased.

In The Ohio Bell Telephone Company, as previously testified to, there has been a gross expenditure for new plant, not including plant purchased, of forty-six million dollars in a little over four years, and thirty-eight million dollars in the years 1923, 1924 and 1925 inclusive.

In my estimation, considering the amount of additions, and as a result of my inspection after taking and including the per cent condition of land as 100 per cent, it is my judgment that the property of The Ohio Bell Telephone Company is in excess of 90 per cent condition.

Mr. McConnaughey: Could you put a figure on the effect of the growth that you speak of?

The Witness: In the case of The Ohio Bell Telephone Company's property, it would be, the way I have developed

this, it would be the difference between 83 and 90.01, which would be 7.01.

Mr. McConnaughey: All right.

Commissioner Poor: Right there, Mr. Stephens, let me ask you on that question of the new property bringing up the old percentage, would the reverse of that be true? The mere fact that you have some property there that is not in [fol. 2309] 100 per cent condition, would that have a tendency to reduce the perfect condition of the new property?

The Witness: Well, if the per cent of the new property—total property, was less than the—say on the annual basis, or less than the annual amount of accrued deterioration in that property, then from a deterioration or per cent condition standpoint the condition of the property would become less and less. The reverse of this would be true; in other words, if we had a property that is all constructed at this time and we do not make any plant additions for the next year, in my opinion the repair that would be done on that property would not keep its present per cent condition the same throughout the year. It would decrease, if that is your question.

Commissioner Poor: I do not believe that is just exactly what I am asking. Whether, irrespective of the amount—or whether the new property is more than the depreciation in the year; I am taking it at the time being; you have your plant in 90 per cent condition; as I get your previous answer, the mere fact that you went in and put in some new additions at 100 per cent would increase that 90 per cent of the other property.

Mr. Burr: No; 90 per cent of the whole.

Commissioner Poor: Bring the whole up; but what I mean is, the mere fact that you had old property in there and you attach new property, wouldn't it reduce that new property immediately from 100 per cent?

The Witness: Not the particular elements; but the whole [fol. 2310] property would be reduced down to the average of that property considering it as a matter of average. In other words, if I put in ten new poles I do not mean to convey that the 110 poles would immediately come up to 110 per cent condition. But if the 100 old poles were 90 per cent and we put 10 more new poles in there, the combined 110 poles, if I was correct in setting the 90 per cent condition

on the original 100 poles, it would surely be better at the particular time those new poles were set there.

Mr. Dotson: Well, along that line, Mr. Stephens, suppose you take one particular piece of property, such as, for instance, Building No. 2 here in Canton that you say its per cent is 85 per cent; you make some repairs on that building; you replacé some parts that are needed to be replaced as a part of the repair; now would you say that you have increased the per cent condition of that entire building having once made that repair?

The Witness: Certainly.

Mr. Dotson: How do you justify that?

The Witness: Well, if I own a residence in Cleveland and if I was offered $10,000.00 for that, or could get $10,000.00 for it, and then I go and put on a new roof and repaint it and redecorate it, I would expect to get more than $10,000.00. I have increased the per cent condition of that property by making those repairs; my house is in better condition than it was before.

Mr. Dotson: You mean to say you have increased the market value of it?

[fol. 2311] The Witness: No; I have increased the per cent condition because those items I mentioned enter into the value of that property.

Mr. Dotson: Suppose, however, that the foundation is bad on which the building rests; naturally that would materially effect the per cent condition of the property and which the roof would not help out; or it might be some other part of the house that remains in the same deteriorated condition as before; now I am talking about the per cent condition for service—for use; not for the open market. Isn't that property, from that point of view, the same as you would determine the strength of a chain, it is as strong as its weakest link?

The Witness: Yes, but if you only had one weak link in that chain, Mr. Dotson, it would be in a whole lot better per cent condition than if all the links were weak.

Mr. Dotson: Well, of course in a chain we have this difference, that you could remove the link and still have a complete chain; but you could not remove the foundation and still have a complete house.

The Witness: I have just recently, in connection with the widening of Carnegie Avenue, seen some buildings lifted

off of their foundations, moved back, three or four story brick buildings, and a new foundation put under them, and I do not believe that the City, in the settlement for that property, considers that the building was greatly damaged during the course of that work. It is perfectly possible to replace the foundation.

[fol. 2312] Mr. Dotson: Well, of course that opens up quite a field for argument. I do not mean to do that, but I just wanted to know, and I am confining my question now and my inquiry to the retention of the property where it is, where it has been located and is located, for a certain specific use, and the per cent condition pertains to the entire structure. It does not pertain to any particular part. You repair a certain part of it. Now I am wondering to what extent we would be justified in changing the per cent condition of that particular property because of that repair. The general condition of the property, it seems to me, would remain practically the same, and its serviceableness would be practically the same. There are cases where that might not be true.

The Witness: If you knock a window out in an upper room, I don't believe from a service standpoint the service condition would be the same as it would be if you put the window back in.

Mr. Dotson: Well, that is an extreme illustration because that is a very minor factor.

The Witness: Well, what I mean is that you have to bring down—exactly the same way that a contractor estimates the cost to reproduce or build a new building; he estimates that by the various parts of the construction of that building; possibly so much for the excavation of the basement; so much for the building foundation; so much for the brickwork; so much for the ceiling; so much for the plumbing; and he arrives at an over-all cost of that building to reproduce it or to build a new one.

Now we know that all of the different parts of that building do not deteriorate with the same speed; we know that the plumbing deteriorates far faster than the concrete foundation. Now I do not see how you could consider the per cent condition of the plumbing a minor item. We might find that in 85 per cent condition and then say, if I get your line of thought correctly, that the whole building is in 85

per cent condition. It only has its weighted part of the value of that plumbing to the total building.

Mr. Dotson: Then it is correct—I do not mean to differentiate from that at all—that the plumbing is to be considered an integral part of the building because we are considering the building as an entirety for a certain specific use. I do not care to pursue the inquiry at this time any further. I just wanted to see to what extent you considered an element of that kind as affecting the per cent condition from time to time.

The Witness: In direct proportion to the per cent condition, to the per cent condition of that part of the property, as the cost to reproduce that part bears to the total structure.

Mr. Tolles: I still insist if you put a new roof on a building it would be in a better per cent condition than if you had an old, leaky roof.

Mr. Dotson: Well, I would rather have that go into the record from the mouth of some one that is sworn to tell the truth.

[fol. 2314] Mr. McConnaughey: May I ask a question, Mr. Burr?

Mr. Burr: Yes.

Mr. McConnaughey: When you made your inspection of these various elements of the property, did you take any field notes of the condition that you found here and there?

The Witness: Yes.

Mr. McConnaughey: Are they available for the examination of Mr. Hagenah?

The Witness: Yes, sir.

Mr. McConnaughey: That is all.

Mr. Burr: If there are no further questions, that is all with Mr. Stephens for the present.

[fol. 2315] And also E. L. Myers, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You are the Mr. Myers who testified before this Commission on December 22nd, 1925, with respect to the reproduction cost new of the buildings owned and operated by The Ohio Bell Telephone Company, are you not?

A. Yes, sir, I am.

Q. Please tell the Commission what the reproduction cost new figures heretofore offered by you in evidence represent?

A. They represent the reproduction cost new value of the different buildings discussed, and include architects' fees for plans and specifications and supervision, but do not include such items as drives, walks, fences, awnings, screens and items I mentioned before. Neither do they include such items as engineering and general expense of The Ohio Bell Telephone Company, interest on the construction fund or taxes on the land and buildings during the construction period.

Q. Those are, however, items to be taken into consideration, are they not?

A. Yes, sir.

Q. In your experience as a contractor and supervisor of construction, tell the Commission whether or not such costs have been incurred by your clients?

A. They have been incurred by our clients and should [fol. 2316] be considered in arriving at the total reproduction cost new value of any building under consideration.

Q. In your previous testimony you stated that all of the buildings which you had appraised had been inspected and examined by you not only for the purpose of checking plans and specifications but also for the purpose of ascertaining the present or per cent condition of the buildings; that is correct, isn't it?

A. Yes, sir.

Q. Will you explain briefly what you mean by the per cent or present condition of the buildings and how you proceeded in order to determine what that per cent condition was as of June 30th, 1925, of the buildings?

A. The per cent condition of the buildings owned by The Ohio Bell Telephone Company, as I have treated it, is a result of subtracting from the reproduction cost new value the value of the deterioration; or, in terms of percentage, consider the reproduction cost new value at 100 per cent; from this subtract the percentage value of the deterioration, and the resultant percentage represents the present condition of the buildings.

I formed my judgment of this deterioration when I visited these different buildings by inspecting the outside and inside of the buildings and taking note of any serious defects.

As I have stated before, I inspected the floors and walls, ceilings, stairs, doors; in fact, everything visible; paying most particular attention to items that were subject to rust, rot, wear or damage; such as plumbing, heating, ventilating, stairways and elevators.

[fol. 2317] Q. Did you endeavor in your inspection to examine all the parts of the building?

A. I did.

Q. I ask you that so as to save itemizing the different classes of property.

(No reply.)

Mr. Burr: If counsel want- me to go into it more specifically I will be glad to.

Mr. McConnaughey: No.

By Mr. Burr:

Q. Well, then I call your attention again to the Akron Main Exchange Building which we have used from time to time in your testimony as illustrative of the general situation; what items are there on that building not subject to wear, rust or rot?

A. Approximately 65 per cent of the value of the building. In the remaining 35 per cent in my judgment there was a deterioration of about $5800.00, or two per cent of the reproduction cost new value. This, added to a general depreciation of two per cent of the building, gives me a total depreciation or deterioration of four per cent, which, subtracted from the reproduction cost new value of 100 per cent, gave me a present condition of 96 per cent, or, in terms of money, $276,340.00.

Q. Have you made a similar computation of the per cent condition of all of the other buildings?

A. Yes, sir.

Q. In the appraisal?

A. Yes, sir.

Q. Did you arrive at the per cent condition of these buildings by the same method as that heretofore testified to?

A. Yes, sir, I arrived at it by the same method exactly.

Q. Have you prepared an exhibit showing the result of [fol. 2318] your inspection of each of the buildings and the per cent condition which you arrived at as the result of such inspection?

A. Yes, sir, I have.

Mr. Burr: It may be marked for Identification Myers Exhibit No. 3, and we offer it in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Myers Exhibit No. 3.

Q. Will you please refer to the first sheet of the Exhibit, which consists in all of four sheets, and tell the Commission what the different columns shown on that page signify?

A. All pages of this exhibit are alike. On the first page, the first column shows the exchange. In the second column it shows the number of the buildings as listed in the Williams Inventory.

In the third column is shown my reproduction cost new value as of June 30th, 1925.

In the fourth column is the per cent condition of these different buildings as I have found it.

In the fifth column it represents in money value the present condition of the buildings.

Q. Now the per cents condition shown in the fourth column, under the heading of "Per Cent Condition", represent what?

A. They represent my best judgment as to the present condition of the buildings owned and operated by The Ohio [fol. 2319] Bell Telephone Company, as of June 30th, 1925.

Mr. Postle: When was Building No. 8 on Sheet 4 erected?

The Witness: I don't know when that building was erected but it has never been occupied or subject to wear is the reason I put it in at 100 per cent.

Q. What is the composite per cent condition for all of the buildings?

A. The composite per cent condition of all of the buildings as I have found it is 93.4 per cent reproduction cost new value, as of June 30th, 1925.

Q. Does that represent your judgment as to that composite per cent condition?

A. It does represent my best judgment.

Q. When, with respect to the time of your appraisal of the buildings, did you arrive at the per cent condition for the buildings?

A. When I visited these different buildings I inspected them both for the purpose of identifying the plans and specifications and also for the purpose of noting any deterioration in these different buildings.

Q. To what extent, if any, did you take into consideration the item of the maintenance of these buildings in arriving at their per cent condition?

A. I took into consideration the maintenance to a very great extent. I found maintenance in very good condition. In these buildings owned by The Ohio Bell Telephone Company and occupied by employes 24 hours a day, the mechanical features of the buildings must of course be kept in first-class condition.

[fol. 2320] Q. What was their condition, in point of fact?

A. They were kept in first-class condition.

Q. Proceed.

A. By mechanical features I mean such items as plumbing, heating, electric wiring, elevators, stairs, doors, windows; in fact, any building, that is used as continuously as these buildings are, cannot be allowed to deteriorate to any great extent.

Q. What about the floors?

A. The floors, while subject to very heavy stationary loads, are not subject to damaging shocks and vibrations such as come in factory buildings or from trucking in warehouses and on loading platforms.

Q. Do you know the dates when the different buildings covered by your appraisal were erected?

A. With the exception of one or two buildings I have no idea when they were erected as the date of erection was not considered in this appraisal.

To a layman a building two years old that is covered with soot and dirt, or may have a few broken window lights or an odd style of architecture, may look older than a building which is 15 years old. Those items of course do not deteriorate a building to any great extent.

Q. Have you gone over your previous testimony given before this Commission on December 22nd, 1925?

A. Yes, sir, I have. I have noticed some discrepancies between the written record and facts as I found them. I would like to correct them at this time, if I may.

Q. Well, what are those discrepancies?

[fol. 2321] A. On page 55 of the record, the reproduc-

tion cost new value of the Barberton Exchange was given as 14823; that figure should be 14813.

On page 61 of the record, the reproduction cost new value of the exchange in Findlay, Ohio, was given $65,993.00, and that figure should be $60,993.00.

On page 65, the reproduction cost new value of the Wickliffe Exchange was given as $9176.00. That figure should be changed to $9576.00.

Q. Has there been omitted from the previous testimony any valuation of the item of buildings shown for Alliance?

A. Yes.

Q. Did you appraise that property?

A. Yes, I did.

Q. As of what date?

A. As of June 30th, 1925.

Q. And what, in your judgment, was the reproduction cost new of the property as of that date?

A. The reproduction cost new of the property at Alliance, Ohio, as of June 30th, 1925, was found by me to be $6377.00.

Q. Is that your judgment of its value as of that date?

A. That represents my best judgment, yes, sir.

Q. Does that amount include anything for such items as engineering and general expense?

A. No, sir.

Q. Interest during construction?

A. No, sir.

Q. Or taxes during construction?

A. No, sir.

Q. Do you know of any omission which you made with respect to any of the buildings of the company in Columbus?

A. There has been a big addition in the way of alterations [fol. 2322] made in a certain building here in Columbus, of the office type. I cannot identify it just now, but I understand those additions cost The Ohio Bell Telephone Company within the last year approximately $50,000.00.

Q. Were they included in your appraisal?

A. They were not.

Q. Were those additions or improvements made prior to June 30th, 1925?

A. To the best of my knowledge they were.

Mr. McConnaughey: What building was that? Can't you identify it?

Mr. Burr: We will identify it for you. It is the so-called Commercial Building, which is located on the east side of Third Street between Gay and Long Streets. It is No. 104 North Third Street.

Unless there are some questions to ask of Mr. Myers at this time he may stand aside.

Mr. McConnaughey: I would like to ask one question; in reference to this Akron Building, you spoke of 65 per cent that was not affected by rust, wear and decay, or something like that?

The Witness: Yes, sir.

Mr. McConnaughey: And 35 per cent that was subject to such deterioration?

The Witness: Yes, sir.

Mr. McConnaughey: Did you use a similar division on the buildings in the other cases?

The Witness: Yes, sir, I followed that method of cal- [fol. 2323] culating deterioration.

Mr. McConnaughey: Was it the same percentage all the way through?

The Witness: Oh, no; take a frame building, there would be a much less percentage than 65 per cent which is not subject to rust, rot, decay and damage.

Mr. McConnaughey: And it might be different in two buildings of a similar type under certain circumstances, I suppose?

The Witness: I would not treat it as such; I would treat it just as a telephone building; if they were both reinforced concrete buildings or structural steel buildings and fireproof reinforced concrete, I would treat them the same.

Mr. McConnaughey: As I understood it, you found in the Akron Building that the 35 per cent that was depreciable in this way was depreciated two per cent? Is that correct?

The Witness: Yes, sir, and I think I added a general depreciation to cover general defects which are hard to pick up and appraise.

Mr. McConnaughey: And that made a depreciation——

The Witness: A total depreciation of four per cent.

Mr. McConnaughey: Well, is that four per cent on the 35, and two per cent——

The Witness: Four per cent of the entire reproduction cost new value as of June 30th, 1925.

Mr. McConaughey: Then you did not fix in your testi-
[fol. 2324] mony the amount of depreciation for these causes, rust, rot and decay, on the 35 per cent separately?

The Witness: Oh, no; I simply divided that building to show you the part of the building that was not subject to rust, rot, wear or damage.

Mr. McConnaughey: I see.

Chairman Marshall: Did you and Mr. Stephens inspect these buildings together?

The Witness: No, sir, we have never been on a trip together.

Mr. Dotson: Did you and Mr. Stephens discuss your data and your investigations and exchange information in determining your separate statements?

The Witness: I never knew that Mr. Stephens was going to hand in a per cent condition value of the buildings until after mine had been calculated.

Mr. McConnaughey: Did he see yours?

The Witness: I do not know; I have never seen his.

Mr. Dotson: You made no comparison of figures in checking up of your statements, one with the other, after they were made?

The Witness: Absolutely not.

Mr. Burr: That is all for the present unless there are some further questions.

Chairman Marshall: We will recess until ten o'clock tomorrow morning.

And thereupon the further hearing of this cause was adjourned until Friday, January 29th, 1926, at 10:00 o'clock a. m.

[fol. 2325]

Morning Session

Friday, January 29, 1926.

COLLOQUY

Mr. Dotson: Your Honors, before we start in with the regular routine there was a matter came up that came to my attention that I desired to just inquire of the Commission about, and that is the question of whether it is necessary for the representatives of the cities present to object to testimony that is offered which we think is subject to

objection in order that the cities may have the benefit of the record, or whether the cities will have the benefit of the objection, if any, by Mr. McConnaughey, representative of the Commission.

We find in discussing it with other attorneys that they had the same impression that I have had, that any objections submitted or made by Mr. McConnaughey would inure to the benefit of the cities; that is if the cities sought to participate in the further proceedings that might follow this proceeding, say, in the Supreme Court; that they would be able to have the benefit of these objections and the record.

Now as far as the attorneys are concerned representing the various cities, I think I am voicing their sentiment when I say that we desire to allow Mr. McConnaughey to make the objections, with the understanding that they will inure to the benefit of the cities. Now there are many times that city representatives cannot be here; there will be times I [fol. 2326] know that I will not be able to attend these hearings perhaps. And yet I would not want to be barred from the use of the record and from the benefit of the objections and the conditions that we might find we would want to avail ourselves of.

Chairman Marshall: Mr. Dotson, I did not hear the first part of your argument or whatever you call it—your statement—but you have a right to intervene; anybody pecuniarily interested, under the statute, after the tentative value is fixed, may intervene.

I do not see why any objections would not inure to the benefit of anybody interested.

Mr. Dotson: Well, there seemed to be some doubt about it, is the reason I mention it now; so that we may all have some understanding of it.

Mr. McConnaughey: Particularly with reference to questions on valuation. What Commissioner Marshall says covers the whole subject, it seems to me. Any exception at this stage of the case can be made the basis of a further objection after the tentative value is fixed, and the whole question come up again, I should say, in some form or other.

Chairman Marshall: The Commission is of the opinion that to save any question about any exception taken by anybody, that it will inure to the benefit of all of them.

Mr. Dotson: Well that has been my understanding of it but there seemed to be some doubt about it.

Mr. McConnaughey: Could there be an understanding of [fol. 2327] that kind, Mr. Burr, on the record?

Mr. Burr: We do not see any objection to that.

Chairman Marshall: Go ahead. It may be understood then, that an exception taken by Mr. McConnaughey will inure to the benefit of all of them.

Mr. Dotson: All right.

Chairman Marshall: I think that any city has the right to intervene at any time and file a protest to the tentative valuation.

Mr. Burr: Mr. Upritchard may be sworn and take the stand.

[fol. 2328] And also JOHN UPRITCHARD, called on behalf of The Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You may state your name.

A. John Upritchard.

Q. In what capacity are you connected with The Ohio Bell Telephone Company?

A. I am vice president and general auditor.

Q. How long have you occupied that position?

A. Since January 1st, 1921.

Q. Prior to that time what was your telephone experience, if any?

A. I started in the telephone business in San Francisco in August, 1895, with the Pacific Telephone and Telegraph Company and the Sunset Telephone Company.

I was transferred to Chicago as acting auditor of the Central Union Telephone Company in May, 1902.

I was then appointed assistant auditor of the Central Union Telephone Company and transferred to Indianapolis in July 1903. I was made auditor of the Central Union Company then in January, 1905.

I was also made auditor of the Cleveland Telephone Company in February, 1906.

Q. The name of the Cleveland Telephone Company was subsequently changed to what?

A. To the name of The Ohio Bell Telephone Company, on October 6, 1920.

[fol. 2329] Q. And that Ohio Bell Telephone Company bore what relation to the present Ohio Bell Telephone Company?

A. That Ohio Bell Telephone Company was one of the predecessor companies, or one of the constituent companies of the present The Ohio Bell Telephone Company.

Then I was transferred to Chicago in May or June, 1911, and I was appointed auditor of disbursements of the so-called central group companies, which consisted of The Chicago Telephone Company, The Cleveland Telephone Company, The Central Union Telephone Company, The Michigan State Telephone Company and the Wisconsin Telephone Company.

I served in that capacity until March 1st, 1914, when I was appointed General Auditor of the Receivers of The Central Union Telephone Company.

Q. How long did you occupy that position?

A. Until the receivership was dissolved which was in April, 1919, I believe.

I was then elected vice president and general manager of the Indiana Bell Telephone Company of Indianapolis, and held that position until I was elected vice president and general auditor of The Ohio Bell Telephone Company, January 1st, 1921.

Q. Under whose direction are the general accounts and records of The Ohio Bell Telephone Company kept?

A. Under mine.

Q. In whose custody are these records?

A. Mine.

Q. Have you, pursuant to the request of Mr. Commissioner Poor, prepared a statement showing the original or book cost to your company of the land shown in Volume 1 [fol. 2330] of Williams' appraisal, which is exhibit 7-a?

A. Yes, sir.

Mr. Burr: It may be marked for identification Upritchard Exhibit Number 1, and is hereby tendered to the Commission.

Let the record show also that the exhibit consists of two parts, the first part having four sheets and the second part one sheet; the first part consisting of the four sheets covers account 211, "Land," as of June 30, 1925, while the second part shows the book cost of land, Account 111, as of June 30, 1925.

The first part may be marked Upritchard Exhibit No. 1, and the second part may be marked Upritchard Exhibit 1-A.

In connection with this exhibit we do not believe that the original cost to the company of its land is the measure of its fair value. But the exhibit is presented to the Commission responsive to Mr. Commissioner Poor's request.

Commissioner Poor: As provided by statute in cases of this kind, you must show the original cost; the Commission must find the original cost of the land.

Mr. Burr: The statute says that the Commission "may"; even though the Commission does so state, we still are entitled to our belief that the original cost is not the measure of the fair value.

I am not quarreling with the Commission, but with the statute.

Also, in order that there may be a full disclosure with respect to the original cost to the Ohio Bell Telephone Com-
[fol. 2331] pany of its property we have asked Mr. Upritchard to prepare an exhibit showing the cost to The Ohio Bell Telephone Company of its fixed capital and construction work in progress.

Q. I will ask you, Mr. Upritchard, if you have prepared such an exhibit?

A. Yes, sir.

Mr. Burr: It may be marked for identification as Upritchard Exhibit Number 2 and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Upritchard Exhibit Number 2.

Q. To the best of your knowledge and belief are the facts and figures shown in exhibit number 2 correct?

A. They are.

Q. What is their source?

A. Well——

Q. Are they from the books of the company, in other words?

A. Yes, sir.

Q. What are the fixed capital accounts that you have referred to?

A. Generally speaking the fixed capital accounts are the several plant and equipment accounts as prescribed in the uniform system of accounts by the Interstate Commerce Commission.

Q. What do the balances in those accounts show, or represent?

A. The balances in those accounts on the books of The [fol. 2332] Ohio Bell Telephone Company represent the cost to The Ohio Bell Telephone Company of the property in those accounts.

Q. You say they represent it; are they those costs?

A. They are.

Q. Does Item 6 of your Exhibit Number 2 correctly show the total of those balances in accordance with the books of the company?

A. Item 6 shows the total book cost of fixed capital and construction work in progress as of June 30, 1925, and the amount shown is in accordance with the books of the company and is the total of the balances in those accounts.

Q. Have you prepared from the books of your company a statement showing the book cost of the gross and net additions to fixed capital and construction work in progress by years for the past four years?

A. Yes, sir.

Q. And also showing the amounts proposed to be expended for the same purposes for the years 1926 and 1927 respectively?

A. Yes, sir.

Mr. Burr: The document produced may be marked for identification as Upritchard Exhibit Number 3, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Upritchard Exhibit Number 3.

[fol. 2333] Mr. McConnaughey: Mr. Burr, would you have any objection to his stating, if he can, what item of Williams Exhibit Number 9 this 100 million compares with; I think item 6 on that exhibit, but I should like to know.

Mr. Burr: I do not believe he has seen Williams Exhibit Number 9.

By Mr. Burr:

Q. What is the source of your information with respect to the amounts proposed to be expended by the company for the years 1926 and 1927 referred to in the exhibit?

A. Well, those amounts shown on the exhibit correspond with the amounts shown in the provisional estimates for those years which were made by the company, and which were based on the actual construction program.

I might say with respect to the 1926 estimated amount that the board of directors have already authorized that amount, approximately 12,900,000.

Q. To be expended in what year?

A. In 1926; and that there will be submitted to the board of directors at their next meeting estimates for expenditures in 1926 amounting to approximately $2,900,000.

Q. That is additional to the amount heretofore approved?

A. That is additional to the 12 million dollars, already authorized by the board of directors.

Q. You have the actual expenditures for additions to the property of the company in each year since its formation compared with the amounts of the provisional estimates?

A. For the last three years the total actual gross additions were in excess of the amounts shown in the provi- [fol. 2334] sional estimate by approximately $590,000.

Q. Have you prepared a statement showing the capital stock and long term debt of The Ohio Bell Telephone Company?

A. Yes, sir.

Mr. Burr: It may be marked for identification as Upritchard Exhibit Number 4, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Upritchard Exhibit Number 4.

Q. What authority, if any, did your company have for the first three items shown in Exhibit Number 4 as the "capital stock common," "capital stock preferred"; and "stock liability for conversion"?

A. Those items are entered on the books pursuant to authority granted in the orders of The Public Utilities Commission in cases numbers 2368 and 2413, dated September

28, 1921, and December 2nd, 1921, respectively, as shown by the note on the exhibit.

Q. What securities are included in the item "Funded Debt" shown in the exhibit?

A. That item represents bonds assumed by The Ohio Bell Telephone Company pursuant to the order of the Public Utilities Commission in case No. 2367, dated September 17, 1921. They represent bonds of predecessor companies, the property of which is now owned and operated by The Ohio Bell Telephone Company.

[fol. 2335] Q. Were those bonds outstanding upon the properties of the predecessor companies at the time of the consolidation between the Ohio State and the Ohio Bell Telephone Companies on September 20, 1921?

A. They were.

Q. What evidences of indebtedness are included in the item "Advances for system corporations for construction equipment and betterments" shown in your exhibit number 4?

A. Those advances represent notes assumed or issued pursuant to orders of the Public Utilities Commission except short term notes, amounting to $650,000, issued in June, 1925, for temporary loans, and since repaid, pursuant to the orders indicated on the exhibit.

Q. Are the numbers and dates of the Commission's orders correctly shown on the exhibit, to the best of your knowledge?

A. Yes, sir.

Q. Are the books of account and records of The Ohio Bell Telephone Company kept in accordance with the uniform system of accounts for telephone companies as prescribed by the Interstate Commerce Commission and adopted by the Public Utilities Commission of Ohio?

A. They are to the best of my knowledge and belief.

Q. Have you prepared a statement showing the number of employees of your company by departments?

A. Yes, sir.

Mr. Burr: It may be marked Upritchard Exhibit No. 5, and is offered in evidence.

And thereupon the document last above referred to is [fol. 2336] admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Upritchard Exhibit Number 5.

Q. That Exhibit shows the number of employees of the company as of what date?

A. June 30th, 1925. It shows the number of employees by departments and divided as between male and female and shows a total number of 12,181 employees in the service as of June 30, 1925.

Mr. Burr: You may stand aside, unless there are some other questions to be asked you either by the Commission or by counsel on the other side.

Mr. McConnaughey: Let me ask you, Mr. Upritchard, this book cost of land is only of land, isn't it?

The Witness: That is of land only, yes, sir; that is the land is in accounts 211 and 111. The buildings are in separate accounts.

Mr. McConnaughey: I understand then that this building at Akron, 72-76 South High Street, which you indicate as $224,797.08, that is the book cost of that property?

The Witness: Yes, sir.

Mr. McConnaughey: Does that represent the land only; does that represent anything beyond the original purchase price?

The Witness: That represents the cost to The Ohio Bell Telephone Company as shown on the books of that company.

Mr. Dotson: That is up to June 30th, 1925?

[fol. 2337] The Witness: Yes, sir.

Mr. Dotson: That may, however, show additions to the cost of it beyond the original price that was paid at the time of the purchase?

The Witness: It consists of the original price to the Ohio Bell Telephone Company plus all additions, less all deductions, if any. That is the balance as of June 30th.

Mr. McConnaughey: Well, as a matter of fact, did The Ohio Bell Telephone Company buy that property except as it took it over from the Central Union?

The Witness: I do not know that I can answer that question, Mr. McConnaughey, because I do not recall the particulars of just how that particular piece was taken over.

Mr. McConnaughey: All right.

Mr. Harshman: In the cases where the company has bought land that was improved property, it paid a certain price for the property as such; how have you treated that

in order to arrive at what the land itself cost the company?

The Witness: Well if it was purchased directly by The Ohio Bell Telephone Company the land and buildings were appraised at the time of the purchase and the amounts so determined were entered in a land account and building account respectively.

Mr. Harshman: By whom were those appraisals made?

The Witness: By the Engineering Department.

Mr. Harshman: Representatives of your own company; employees of your own company?

The Witness: Yes, sir.

[fol. 2338] Mr. Harshman: And then the auditor has accepted their figures; in other words he has put on the books the figures that they determined as representing the value of the land and the figure as representing the value of the buildings in each particular case?

The Witness: Yes; in cases where there was one up-set price for the land and buildings, yes, sir.

Mr. McConnaughey: That being the case, it seems to me this exhibit does not conform either to the request of Commissioner Poor or the provision of the statute which requires that the original cost of the real estate be determined.

Mr. Tolles: That is as near as anybody on earth can get at it.

Commissioner Poor: Mr. Upritchard, what additional costs would be reflected in there?

The Witness: Do you mean——

Commissioner Poor: You said that this shows the book costs of the land as of June 30, 1925, which meant not only the original cost but any additional costs which may have accrued since the original purchase of the land.

The Witness: Well I don't know specifically any items, but there might be some paving assessments or items of that kind that are chargeable to the land account, that might be entered in there.

Mr. Dotson: General taxes would not be entered as a part of the cost, would they?

The Witness: No, sir; taxes are treated as a deduction [fol. 2339] from income.

Mr. Dotson: But you think that all assessments for local assessments for local improvements would be carried in the cost of the building to that account—I mean land?

The Witness: Well I would not like to say offhand that

all assessments are directly charged to the land account, but there are some.

Mr. Dotson: Well those that are carried in the land account are naturally for local improvements on which the property abuts; wouldn't that be the case?

The Witness: Yes, sir.

Mr. Dotson: Your books would show those items as of the date of payment and the amount that was paid?

The Witness: Yes, sir; we have a detail of every item paid.

Chairman Marshall: When the Ohio Bell Telephone Company acquired title to the property do you say that they had different figures than contained in your exhibit; that is, in other words, you have added wherever there were any additions to it?

The Witness: I took off the balances as they appeared on the books as of June 30, 1925. I did not go back to the original cost to The Ohio Bell Telephone Company.

Chairman Marshall: Then Mr. McConnaughey's objection is well taken, isn't it?

Mr. McConnaughey: I had not in mind, Mr. Commissioner, particularly making an objection to it, but calling your attention to the adequacy by the suggestion or inten- [fol. 2340] tion to suggest, that it should be amplified by showing the detail; how much was the original cost price and then what has been added by way of whatever additions there were.

Chairman Marshall: What the Commission wants is the actual cost price at the time of the acquisition of the title to the property by The Ohio Bell Telephone Company. If there are any additions they should not be in it. I think you are right in your contention.

Mr. Burr: There has been no attempt to evade the Commission at all or the requests of Mr. Commissioner Poor. The statute with respect to the land speaks of the original cost. It does not say the original cost of any date.

Chairman Marshall: What would be an original cost? The cost to them at the time they acquired the property; is that it?

Mr. Burr: Very well; if that is what it means, perhaps we should have gone back to December 20, 1921. But I am not sure that that is what the statute means, because the original cost of our land is something that may be in-

creasing right along; the cost of that land to us; that is the cost of that land to us on our books, may be different today from what it was September 20th, 1925.

Commissioner Maullar: That would be your total cost.

Mr. Burr: Total original cost.

Commissioner Maullar: Your original cost is your first cost, isn't it?

Mr. McConnaughey: At the time it was purchased and went into public service.

[fol. 2341] Mr. Dotson: That is when it originated as far as the company is concerned. That is what is meant by the statute, the orgin of the ownership.

Mr. Burr: Well I think we probably are taking up a good deal of time with a more or less academic discussion, and we will takes the Commission's suggestion under advisement and see if we can satisfy you at the next hearing. We cannot do it here today. And as I say, there has been no intention to evade the request of the Commission by preparing the exhibit as we have, and I still believe that it is an open question as to what does constitute the cost of land to a company or to an individual, because I may buy a piece of land and pay——

Commissioner Maullar: Specification "C" tells you how to set up any additions thereto.

Chairman Marshall: If I paid $10,000 for a piece of property five years ago, that is the original cost. I may put $10,000 more on to it.

Mr. Burr: The original cost of the land as it was five years ago, but suppose that by reason of improvements you have had to spend more on that land; for instance an improvement which might have been made, the cost of which might have been assessed five years later. That is the first time that you have incurred that cost, and it is part of the original cost of the entire property to you.

Now with reference to Paragraph C, to which Mr. Maullar has called our attention, that provides for the evaluation or additional value to the utility or the railroad by reason [fol. 2342] of the ownership by it of one or more parcels of land and its use as a continuous right of way for transportation purposes.

I am quoting the language of the Act—"or for other purposes, such additional value shall be separately and specifically set forth for each parcel", and so forth.

I think under that section the point is made that railroad-property, for instance acquires an additional value by reason of the fact that it is one continuous right of way passing through a community, but I do not think that affects the question we are discussing here.

Mr. McConnaughey: Let me ask you this, Mr. Upritchard; at the time of the taking over of the Ohio property of the Central Union Telephone Company that entire property was taken over at a lump sum as I understand, and that lump sum was distributed on the books of the Ohio Bell Telephone Company by the officers and employees of The Ohio Bell Telephone Company according to their judgment of the value of the respective properties; is that correct?

The Witness: On the basis of the appraisals which were on file, yes, sir.

Mr. McConnaughey: On file where?

The Witness: On file in the engineering department of the company.

Mr. Burr: You are talking about the acquisition by The Ohio Bell Telephone Company of the property of The Central Union Company, are you, Mr. McConnaughey?

Mr. McConnaughey: Yes. And the same thing was done, [fol. 2343] or something similar to that, at the time The Ohio Bell Telephone Company and Ohio State Telephone Company were consolidated, with the property taken over from the Ohio State Telephone Company?

The Witness: Well, the properties of The Ohio State and Ohio Bell companies were taken over onto the books of the new corporation, the consolidated company, as they appeared on the respective books of the two constituent companies.

Mr. McConnaughey: Then those figures do not present the price at which any of this real estate that was in the property at that time, at those two dates, was purchased originally from the people who owned it before it became telephone property?

The Witness: Well I don't know as I can answer that. The amounts taken over on to the books of the consolidated company, that is the present Ohio Bell Telephone Company; the amounts taken over were the amounts shown on the books of the Ohio State Telephone Company and the old Ohio Bell Telephone Company as of September 20th, 1921.

Mr. McConnaughey: And unless that happened to be the

original purchase price they were not taken over at the original purchase price?

The Witness: They were taken over at the figures shown on the books of those companies as of September 20th, 1921.

Mr. Burr: And what relation was there between those figures and the order of the Commission?

Mr. Dotson: I don't suppose he would be competent to say.

[fol. 2344] Mr. Burr: I will withdraw the question.

Mr. McConnaughey: Now, if the Commission please, that is the very point I was leading up to. I do not believe the original cost is the original cost to this company under those circumstances.

The original cost is the cost at the time this property was purchased and put into service for telephone purposes. That is the time when the property was separated from the general body of property and became public utility property. And if the provision of the statute has any purpose at all it must be to determine the value at that time.

Chairman Marshall: The original cost to the company whose rates are at issue here; because there may have been a half dozen purchasers of title, and you could not take the original cost to some original purchaser probably four or five degrees away from the present ownership. I do not agree with you on that. I think you are right on the other proposition.

There should be a separation, probably. And this Commission went into this valuation of the property and we found the value set up to be at least equivalent to what we gave them the right to purchase it at, and that would be the original cost to this company.

The ruling of the Commission will be that the request of Commissioner Poor— and the ruling of the Commission now is that the company furnish to the Commission a statement of original cost as provided by statute, of all parcels of real estate owned by it and the original cost as con-[fol. 2345] strued by the Commission is the cost at the time of the acquisition of the property by the present The Ohio Bell Telephone Company.

Mr. Burr: Will that include land acquired on September 20th, 1921, and since disposed of?

Chairman Marshall: No.

Commissioner Poor: Just the parcels of land in this controversy.

Mr. Burr: That would be a part of the original cost of our land.

Mr. McConnaughey: Because of the fact that it was purchased in a lump sum?

Mr. Dotson: This only relates to land now used by The Ohio Bell Telephone Company.

Mr. Burr: All right.

Chairman Marshall: Anything you sold or disposed of; we want each parcel of land now owned and the original cost at the time of the acquisition of the title to it, whatever that may be. I remember very well; I think you had—in showing up your valuation—you had real estate in it. If you have got a division of it for each appraisal, that is what the statute says, each appraisal.

Mr. Dotson: Note our exception to the ruling of the Commission insofar as it relates to lands that were taken over by the present Ohio Bell Telephone Company from former constituent Bell companies.

Mr. Harshman: Does the Commission grant exception to all cities?

[fol. 2346] Mr. McConnaughey: Yes, that is understood.

Mr. Hagelbarger: I would like to ask the witness a question. Are you familiar with the two properties on South High Street in Akron?

The Witness: No, sir.

Mr. Hagelbarger: Do you recollect whether or not the appraisals were the same on those two properties?

The Witness: No, sir, I do not.

Mr. Hagelbarger: You know, do you not, that the properties lie adjacent to each other?

The Witness: That I do not know.

Mr. Tolles: That information is outside of his department and he is not supposed to know that.

Mr. Hagelbarger: He is vice president of the company, and I just wondered what he knew about it. The one property known as the Bell Building is at 72 South High Street, and the Ohio State Building at 82 South High Street. When I said they lie adjacent to each other, there is one building

known as the Elks' Club, between them; do you recollect that?

The Witness: I have seen it, yes.

Mr. Hagelbarger: And as to the size, do you remember how they compare, the two properties?

The Witness: Well I have been there, but I am not familiar with the properties.

Mr. Hagelbarger: Well, the Ohio State property is at least half as large as the Bell property, isn't it?

The Witness: I don't remember.

Mr. Hagelbarger: Well approximately so?

[fol. 2347] The Witness: I do not recall.

Mr. Hagelbarger: And you have the Bell property in here at 224 thousand and odd dollars, and the Ohio State property at 6 thousand dollars. I was wondering what benefit it was to have appraisals if there was that much difference in an appraisement of land lying so close together. Do you know the object of those appraisals?

The Witness: No I don't. Those figures as shown here are as shown on the books of the present Ohio Bell Telephone Company.

Mr. Hagelbarger: Do you know what the appraisers did in fixing the cost?

The Witness: Not with respect to those specific pieces of property, no, sir.

Mr. Hagelbarger: Well what do they do generally, in a general way, so far as you know, in apportioning this cost, if that was what was done?

The Witness: Well in taking over the property from the Central Union Telephone Company there was evidence submitted in that case, as I remember, and land was shown as a separate item, in total some $883,000, as I remember, the total of all the land purchased by The Ohio Bell Telephone Company from the Central Union Telephone Company.

That $883,000 was distributed by parcels on the books of The Ohio Bell Telephone Company on the basis of appraisals which had been made by our engineers. Those appraisals are now on file in the engineering department, so I understand.

[fol. 2348] Mr. Hagelbarger: And they are available to the engineers of the Commission?

The Witness: I presume so.

Mr. Hagelbarger: That is all.

Mr. Burr: If there are no further questions, Mr. Upritchard may stand aside, and Mr. Williams may resume the stand.

[fol. 2349] And also GEORGE B. WILLIAMS, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Mr. Williams, in your experience with telephone companies, and in your experience in the telephone department of The Public Utilities Commission of Ohio, what experience, if any, have you had in the matter of fixing the per cent condition of telephone property?

A. I have had experience in determining deterioration and present condition of telephone properties in the State of Ohio running back eleven or twelve years, beginning at the time I was connected with the Public Utilities Commission of Ohio and continuing through the time that I have been with the Central Union Telephone Company and Ohio Bell Telephone Company.

My experience in connection with this kind of work covered both independent and Bell properties, and covered all of the different classes of property owned by the telephone companies.

During the time I was connected with the Public Utilities Commission of Ohio we made inspections of numerous telephone properties in the State of Ohio, both exchange and toll properties, and situated in all of the different parts of the State of Ohio.

Since my connection with the Central Union and Ohio [fol. 2350] Bell Telephone Companies, I have inspected probably 80 or 100 different exchange properties and have given considerable time to an inspection of toll properties of the present Ohio Bell Telephone Company in various sections of the state. These inspections were for the purpose of determining the amount of rot, rust, wear and tear and decay evident in the different items of telephone property, and were inspected separately for each class of property.

My inspection generally followed along about the same lines as that already testified to by Mr. Stephens.

That is, for central office telephone equipment, I inspected for condition of finish, of the switchboards and iron work; the wear and tear on plugs, jacks and various moving parts; deterioration of cable; damage to woodwork and items of a like nature.

Relative to other equipment of central office, I inspected particularly for finish and woodwork or metal parts—damage to woodwork or metal parts and stability of such items as chairs, tables and desks.

In connection with the subscribers' station apparatus I inspected for rot, rust, wear, tear and decay as evident in the finish of the stations, that is the paint finish, and nickel finish; the felt on the bottoms of the desk stands; the wear and tear and damage by moisture to cords, and items of a like nature.

In regard to station installations I inspected particularly for wear and tear and also the effects of moisture on wiring, damage to insulators and so forth.

[fol. 2351] In regard to private branch exchanges, I inspected in generally the same detail as that already described for central office telephone equipment.

For booths and special fittings I inspected for deterioration due to damage either in the finish or in the woodwork itself in booths.

I inspected for stability of the booth itself, and for the wear and tear evident upon stools, electrical switches signs and so forth.

In connection with interior block wires, I inspected for wear and tear particularly in regard to insulation of the wires, broken insulators and items of a like nature.

In regard to both exchange and toll pole lines I inspected for butt rot, splits, hollow heart, cracks, shell rot, and items of a like nature.

In order to make this inspection it was necessary, if the butt of the pole was not exposed, to dig around the butts of the poles where butt rot is most evident and most likely to occur, and in some cases necessary to climb the poles in order to get a closer inspection of the condition of the poles at or above the cross-arms.

In connection with exchange aerial cable I inspected for crystallization wherever evident; for trouble splices, for damage to galvanization of messenger; rust on messenger and on rings; the condition of terminals relative to paint,

broken doors, and such items; the condition of platforms and pole seats.

In connection with aerial wire I inspected on the iron [fol. 2352] wire for rust, particularly; the breaking down of galvanization; and on copper wire for evidences of deterioration due to acid fumes.

I also took into consideration trouble splices which are an evidence of crystallization or a bad condition of copper wire.

In regard to both twisted pair, line and drop wire, I inspected particularly for deterioration of the insulating material due to wear and also to the effects of weather.

In connection with both aerial cable and underground cable and also in connection with inspections for deterioration on wire I have had advantage, as Mr. Stephens had, of seeing cable and wire just after it was taken down in storerooms, and have taken into consideration in my inspection for deterioration the information that I gained from the inspections of this cable and wire on the ground in various parts of Ohio.

Q. Do you remember, or do you know how many miles you have covered in inspecting toll lines alone of the Ohio Bell Telephone Company within a recent period?

A. I do not believe that I have specific information on that in miles, but I have inspected many miles of it both to determine the condition of the toll lines at a given time and also in connection with the inspections that I have made of exchange plant both as regards the toll plant adjacent to the exchanges and also as regards the toll plant as between the exchanges.

The total pole line mileage inspected by me for deteriora- [fol. 2353] tion I should say would run into several thousand miles, exactly how many I could not tell without considerable thought and computation.

Q. I think it is already in the record in the toll case, and I merely asked you whether you could recall what that testimony was. Now how much of the time in the last four and a half years, or since the inception of the Ohio Bell Telephone Company, have you spent in appraising the property of the company and in determining its per cent condition; that is to say, how much of your entire time during that period has been devoted to the work?

A. Oh, I should say better than ninety per cent of it. And

during this period I have spent as a matter of determining deterioration, a total of several months' time, ranging from a day or two in the very smallest exchanges, to as much as two weeks on some of the largest exchanges.

Q. And even prior to September 20, 1921, you had been doing work of the same kind, had you not?

A. Yes; I had been engaged in that sort of work to a considerable extent as far back as 1914. In fact some of the first work that I ever did in connection with the appraisal and inventory of telephone properties was also the determination of deterioration. That was one of the first things I started to learn in connection with inventory and appraisal work.

Q. Now you may proceed with your discussion of the inspection made of the various classes of plant.

A. Coming now to the item of exchange underground con- [fol. 2354] duit I have inspected that class of property in a great many exchanges in the State of Ohio, my inspection consisting principally of a determination of deterioration as evident from what could be seen in the manholes.

Very little of this class of property except what is to be observed in the manholes can be seen.

The evidences of deterioration consist of broken conduit as seen in the manholes; that portion of it that is evident in the manholes; the deterioration of brick and mortar in the walls of the manholes; the rust on manhole frames and also the rust and broken covers that are seen in connection with manholes.

Mr. Dotson: May I ask a question?

Mr. Burr: Yes.

Mr. Dotson: Mr. Williams, did you take the condition in which you found the manholes and the various other parts of the conduit system that you have just described as a basis of determining the condition of the underground conduit portion of the system that you say was beyond observation.

The Witness: Practically so, Mr. Dotson; in other words I have deviated very little from the conclusion that I arrived at by means of the inspection of the conduit and the manholes themselves.

Mr. Dotson: Well would the condition that you found in the manhole and thereabouts, prevail throughout the entire conduit system that is beyond your observation?

The Witness: Not entirely. In my judgment the con-

dition that you find in a manhole is evidence of a worse [fol. 2355] condition than the average, because you there have the effect of more damage on the average and also the greater effect of the elements in the manholes than you would have in the more hidden parts of the conduit system.

Mr. Dotson: Then as a matter of fact the condition of the manhole does not reflect the condition of the balance of the system?

The Witness: It reflects a worse condition than you will find in the balance of the system in my judgment.

Mr. Dotson: To what extent, if at all, does it reflect the condition of the balance of the system?

The Witness: As to the extent that it would affect it, that would depend on each specific case and instance. I would not care to give a judgment offhand on the general condition beyond what I have stated; that I have given little effect to any other situation.

Mr. Dotson: Then you do not want the Commission to understand, or you do not want the record to show, that the condition that you found in and about a manhole is to be considered as affecting the underground system, only insofar as that portion is involved in the manhole and the portions that you inspected?

The Witness: Please read that question again.

(Question read.)

The Witness: If I understand your question right, what is in the manholes affects what is in the manhole, and that is right.

Mr. Dotson: Yes. That is all.

[fol. 2355a] The Witness: That is right.

Mr. Dotson: Now what proportion is the manhole to the entire underground system?

The Witness: That varies in every city, Mr. Dotson.

Mr. Dotson: Well it is a very small portion, although an important part?

The Witness: Not necessarily a very small portion. It may be quite a considerable portion.

Mr. Dotson: Then as a matter of fact you have no means of knowing the condition of the underground system, of that part that is beyond the observation?

The Witness: Only as a matter of general knowledge and as a matter of information that I have received from dis-

cussion with different plant and engineering people; as a matter of reading, and experiences of that kind. From that information it is my judgment, as I have stated, that the condition of the manhole is worse in the average, than what you find in the balance of the conduit system.

By Mr. Burr:

Q. Will you discuss next, Mr. Williams, what you did in arriving at the per cent condition of the exchange underground cable if that is the next item on your list?

A. I inspected the exchange underground cable in about the same detail as the aerial cable; the underground cable of course being open for inspection only in the manholes and in the risers from the underground to the terminals.

Q. To the terminals where?

A. On the poles. I inspected for the effects of deteriora- [fol. 2356] tion in the sheath for electrolytic action, for dents, bends, cracks, and items of a like nature.

In connection with both the exchange and toll submarine cable——

Q. Well, Mr. Williams, before you discuss that, let me see if my understanding is correct in this respect; your underground cable emerges from the ground at various points, and is carried up to a pole and up the pole to what you call a terminal?

A. That is right.

Q. Which is a box erected on the pole?

A. Yes.

Q. Now, is that cable known as underground cable throughout its course, that is to say clear up to the point where it terminates in a terminal?

A. It is; and also includes the terminal itself.

Q. So that notwithstanding a part of the cable is in the air, in the sense that it is extended up the pole to the terminal, it is still called underground cable?

A. Yes, sir; in accordance with the provisions of the interstate system of accounts.

Q. Reference was made to it yesterday, and I had the feeling that it had not been made quite clear and that is the reason for the question. Now you may proceed with the submarine cable.

A. In connection with both exchange and toll submarine cable, my inspections for deterioration were confined en-

tirely to the points at which the submarine cable emerged from the water or from underground.

This is a relatively unimportant item, and I did not feel that it was worth while to go further in this respect, and I [fol. 2357] did not have the advantage of inspection of any more of this cable on account of having been on the spot at the time any of it was lifted out of the water, that Mr. Stephens had.

In connection with the office furniture and fixtures, I have inspected this class of plant in a great many of the exchanges of the State of Ohio, as well as in the district, divisional and general offices of the company.

This class of equipment, consists of the desks, chairs, files, typewriters, calculating machines and items of a like nature.

These items were inspected for finish, stability, mechanical damage and wear and tear.

The general store equipment is another relatively small item and consists of the bins and shelving found in storerooms.

I inspected the general store equipment in a considerable number of the exchanges in the State of Ohio principally for wear and mechanical damage. I have inspected general stable and garage equipment in fifty or sixty different exchanges, in the State of Ohio, for wear and tear, rust and damage.

General tools and implements have been inspected in the storerooms in between seventy-five and a hundred different points, and the inspection was for deterioration resulting principally from rust and wear and tear.

My inspection of the toll and exchange property of The Ohio Bell Telephone Company covered, as I have stated, [fol. 2358] principally a period of four or five years.

In arriving at my judgment as to the deterioration existing in the property of The Ohio Bell Telephone Company as of June 30th, 1925, I have taken into consideration the results of my inspections of the different classes of property in each of the exchanges, and of the toll property.

I have also had consideration for the fact that during about the last four or five years there has been placed in The Ohio Bell Telephone Company's property new property to the extent of almost fifty per cent of the now existing property. And while my judgment was arrived at primarily from my inspections covering a period of years,

the average of which would probably run around two or two and a half years ago, having consideration for the fact that new property is constantly being installed and placed at the rate of some ten or twelve per cent per year, and feeling certain that the property does not deteriorate to that extent, I feel that the figures that I originally arrived at as the result of my inspections are, if anything, low as regards per cent condition.

I have prepared an exhibit setting forth my judgment based primarily, as I say, upon my inspections over this period of years, and also giving some effect to my knowledge of the growth of the property and my familiarity with the property as I went over it, subsequent to the field inspections.

[fol. 2359] Mr. Burr: The document may be marked for identification as Williams Exhibit 12, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 12.

Q. Before you discuss the exhibit, let me ask you whether or not either Mr. Myers, with respect to the per cent condition of buildings, or Mr. Stephens, with respect to the per cent condition of the property generally, collaborated with you in the preparation of the exhibit.

A. In no respect whatever. I have never talked, prior to the preparation of my exhibit, either with Mr. Myers or Mr. Stephens, relative to the composite per cent condition or to the per cent condition of any of the classes of property. My per cent condition both as regards composite and that for individual classes of property was arrived at absolutely independent of Mr. Myers, Mr. Stephens or anybody else.

Chairman Marshall: Do you have a common method among your appraisers?

The Witness: Well, I stated, I think, that after hearing Mr. Stephens' testimony that my inspection for the deterioration or per cent condition followed along generally the same line as Mr. Stephens'.

By Mr. Burr:

Q. That must necessarily be so if you are going to determine the per cent condition by inspection, is it not?

A. I can only say as to what my judgment is as to the [fol. 2360] proper way to do it.

Chairman Marshall: You have discussed with all your engineers, haven't you, the method pursued?

The Witness: I discussed it with various of my engineers, but I never discussed it with Mr. Stephens or Mr. Myers.

Mr. McConnaughey: Is there a routine or book of instructions or anything of that sort that is prepared for the guidance of man in your position working for the telephone companies in general or the Ohio Bell Telephone Company?

The Witness: To determine the per cent condition?

Mr. McConnaughey: Yes.

The Witness: Not that I know of.

Mr. McConnaughey: That is left entirely to your independent judgment?

The Witness: Judgment and training, yes, sir.

By Mr. Burr:

Q. Will you explain the exhibit briefly in order that the Commission may understand how you arrived at the figures shown in the last column?

A. This exhibit is set up in substantially the same form as that used by Mr. Stephens. Mr. Stephens' exhibit was prepared entirely independent and you will note if you make a comparison that there is a slight difference in the figures in regard to the column headed "Per Cent Total Reproduction New In Each Class of Plant."

The differences are, as I say, slight, but they were prepared absolutely independent of each other.

Q. Now with respect to the first column of figures under [fol. 2361] the heading of "Account Number" and the second column under the heading of "description," what general form does that part of the exhibit follow?

A. That follows the form and generally the wording prescribed by the Interstate Commerce Commission System of accounts.

Q. Now proceed.

(No reply.)

Mr. Dotson: Mr. Williams, isn't it a fact that the company has on file as a part of its records a complete list of all of these items of property showing the per cent condition at certain times?

The Witness: If it has outside of the result of a specific rate case, I never heard of it.

Mr. Dotson: Well has it a record of per cent condition of the property other than these two statements which you have made up, one by you and one by Mr. Stephens?

The Witness: It has statements made up in connection with each rate case that we have had and which are the result of specific inspections and particular inspections for that rate case. Other than those I never heard tell of any.

Mr. Dotson: Well those statements or records were available to you and Mr. Stephens both?

The Witness: What statements do you refer to?

Mr. Dotson: Per cent condition made up in the various rate cases.

The Witness: Well I do not know whether they were available to Mr. Stephens or not because I don't know anything about how he prepared his, but I have already stated that I took my own inspections that I had made in connection [fol. 2362] with each rate case into consideration in order to arrive at my composite per cent for each class of property.

By Mr. Burr:

Q. You testified in many of the cases to which you refer as to the per cent condition of the property did you not?

A. Dozens of them, yes, sir.

Mr. Dotson: Well it is from that data then, more particularly, that you prepared the statement you are testifying to today?

The Witness: That was the main basis for that, and as I have stated, my knowledge of the growth of the property and my familiarity with it since the specific field inspections.

Mr. Dotson: The improvements made by the company as you have stated have been very rapid and on a very large scale during the last two or three years throughout the state?

The Witness: I would consider them so, yes, sir.

Mr. Dotson: Then a statement of per cent condition or a study of the per cent condition of the property of, say a year and a half ago, or a year ago, even, would not reflect the per cent condition as of this time or of June 30, 1925?

The Witness: In my judgment it would reflect a minimum per cent condition, a per cent condition probably not as good as that found today.

Mr. Dotson: Then if you relied mainly upon the previous study of per cent condition of the property, say a study made a year prior to June 30, 1925, then the per cent con-
[fol. 2363] dition you show here would be only a minimum and not an accurate per cent condition?

The Witness: I had intended to make a specific statement before I finished my testimony that in my judgment the composite per cent condition shown on Williams Exhibit No. 12 of 90.09 per cent, is the minimum per cent condition in my judgment; that is that the per cent condition is really something higher than that.

Mr. Tolles: I thought the theory was that cross examination would go to some other date, but it seems to me that ought to be completed or else omitted, one or the other.

Mr. Dotson: Well there are some things that are hard to go back to and attention can be called to in a very brief cross examination right now and probably answer the entire purpose of cross examination on that point.

Mr. Tolles: I think full cross examination would be easier.

Mr. Dotson: Well that is impossible, Mr. Tolles; we regret it. We are not elated over this method of cross examination, ourselves.

By Mr. Burr:

Q. Mr. Williams, will you continue your discussion of the exhibit with reference to the three columns of figures?

A. In the column of figures under the heading "Per Cent Total Reproduction New In Each Class of Plant" I distributed the proportions of the reproduction cost new for each class of property as their relation is to the total reproduction cost new for all of those classes of property.
[fol. 2364] In the column of figures headed "Per Cent Condition" is set up my judgment as to the minimum per cent condition for each class of property.

In the last column the figures under the heading of "Equated Per Cent Condition" I have set up the product for each class of plant of the proportion of the reproduction of each class of plant and the per cent condition for each class of plant is the percentage that the depreciated value for each class of plant bears to the total reproduction cost new of all of the plant.

Coming to the bottom, the total depreciated value or present condition bears to the total reproduction cost new a percentage relation of 90.09 per cent.

Q. And that 90.09% represents what?

A. My best judgment as to the minimum per cent condition of the property of The Ohio Bell Telephone Company as of June 30, 1925.

Q. Yesterday Mr. Commissioner Poor asked one of the witnesses something with respect to the depreciation of the matter of right of way. What have you to say on that subject?

A. My judgment and understanding of the class of property designated as Account 207, "Right of Way" is that first this is not a depreciable item. It is set up in the interstate system of accounts as an item of property to be amortized over a period of years. That is one reason for not depreciating it in finding the observed condition or the per cent condition at a given time; another reason being that in my judgment the right of way is in 100% condition until the time that it is given up or amortized.

[fol. 2365] In other words, the right of way itself is just as good, even though it is on a permission of a certain length in years, or given in connection with a contract covered by a definite term of years; it is just as good one year before the contract expires as it was when you got it. Now that is as applies to the right of way itself; that is my own judgment in regard to it.

Mr. Dotson: Well that would only apply, Mr. Williams, to the period of time it had to run and not to the period of time that the company is expected to operate and render service?

The Witness: Well after the contract expired you probably would not have it; you would have to get it again.

Mr. Burr: How many such contracts have we, if any?

A. Oh, thousands of them.

Q. That are limited?

A. Oh, no; I mean as a whole. I could not tell you what proportion the limited number is as to the total.

Q. Did you ever see one?

A. Yes.

Q. How many?

A. Oh I have seen a great many.

Q. That is, that are limited?

A. No, sir; as a total.

Q. How many have you seen that are limited as to point of time?

A. That would be a matter of recollection, but I am sure that we have some that are limited, although the majority of them by far are not limited.

Mr. Tolles: I have been at it a good many years, and I never saw any yet. Maybe you have done better than I.

Mr. Burr: Mr. Williams may stand aside.

Chairman Marshall: We will recess at this time until 1:30 o'clock P. M.

[fol. 2366] Afternoon Session

Friday, January 29th, 1926.

And also WALTER G. SCHNEIDER, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Mr. Schneider, what experience, if any, have you had in the matter of estimating and fixing the item of value or cost known as Cost of Establishing the Business for telephone properties?

A. In connection with the cost of establishing business for telephone properties I have studied that subject for a period of 11 or 12 years.

Realizing that the bare bones or physical property values are only one element to be considered in connection with an enterprise which has an attached business and is earning money, I have endeavored to investigate, and have investigated all such other costs which I think are pertinent and indicative of costs necessary to put such bare bones of physical property into a concern which is operating, doing business and earning money.

Q. Is there then an additional cost or value inhering in the property of The Ohio Bell Telephone Company as inventoried in this case over and above the physical property costs, the overhead or undistributed structural costs and the other costs evaluated in the appraisal thus far sub- [fol. 2367] mitted?

A. There is, and those costs may be designated as the costs necessary to establish the business.

Q. To what do you refer by the term "Cost of establishing the business"?

A. Those inevitable additional costs necessary to bring a concern into a position of being an operating concern and earning money.

Q. Have you evaluated that cost or value with respect to the property of The Ohio Bell Telephone Company as of June 30th, 1925?

A. I have.

Q. Have you prepared an exhibit on the subject?

A. Yes, sir.

Mr. Burr: It may be marked for Identification as Schneider Exhibit No. 3.

And thereupon the Document last above referred to is marked for purposes of identification herein as Schneider Exhibit No. 3.

Q. I will ask you to explain the exhibit insofar as it requires explanation?

A. In endeavoring to arrive at all of the evidence of value in connection with this case it was necessary not only to inventory all of the physical property and its attributes, but it was also necessary to inventory those elements of value other than is represented by the physical property.

I have analyzed the business of The Ohio Bell Telephone Company as of June 30th, 1925, and using that analysis as a basis I have set up in my Exhibit No. 3 the costs which, [fol. 2368] if the property were to be reproduced, would be inevitable and necessary in order to make the physical property which Mr. Williams and I have testified to heretofore function as an organization giving service and receiving revenue for that service.

Q. Do any of the costs to which you will testify in connection with the cost of establishing the business of the Company include anything which The Ohio Bell Telephone Company receives by way of services from The American Telephone & Telegraph Company under the so-called License Contract?

A. To my best judgment I believe that there is nothing included within my Exhibit No. 3 covering any of the service rendered by The American Telephone & Telegraph Company or the values of service rendered by them.

Q. Will anything of that kind be covered in your explanation of the exhibit?

A. I do not quite understand?

Q. Will anything of that kind, that is, any value referable to the service rendered The Ohio Bell Telephone Company from the American Company, be included in the discussion which you will give of the exhibit itself?

A. No, sir. I might say that in addition to the costs which I will cover or testify to there are certain other costs which I have not considered in this study.

Q. What are they?

A. I refer to those expenditures for preliminary organization, legal services during the preliminary period, financing costs, preliminary engineering and survey costs, franchise costs, and preliminary development costs.

[fol. 2369] Q. Calling your attention to pages 2 and 3 of the exhibit—and when I refer to the exhibit it means Schneider Exhibit No. 3—as I understand it, those sheets are summary sheets to which have been carried forward the various items of cost which are discussed in the subsequent pages of the exhibit; is that correct?

A. They are a summarization of the various details covered subsequent to these pages and also carry original computations relative to several items.

Mr. McConnaughey: Are any of these costs based upon direct evidence of expenditures?

The Witness: Every cost that I have included in here is based on the experience of The Ohio Bell Telephone Company, yes, sir.

Mr. McConnaughey: That does not answer my question.

The Witness: I understood your question to refer to direct costs.

Mr. McConnaughey: Well, do you set forth any direct costs in this exhibit?

The Witness: My understanding of direct costs would be costs which were incurred by the Company?

Mr. McConnaughey: Yes?

The Witness: Yes; I said that the figures which I have embodied in this cost of establishing business exhibit reflects costs which have been paid by The Ohio Bell Telephone Company for the items which I will discuss.

Mr. McConnaughey: Well, do they show the actual expenditures?

The Witness: Just how do you mean "Do they show the [fol. 2370] actual expenditures"?

Mr. McConnaughey: Do they show any money actually spent by the Company for any of these purposes at any particular time?

The Witness: They show money actually expended for the various items that I show on pages 2 and 3 of my exhibit, yes.

Mr. McConnaughey: Do you mean to say that pages 2 and 3 of your exhibit set forth a transcript from your records for construction accounts or plant accounts or any other accounts that those sums were spent by the Company for the purpose of establishing business or maintaining or creating any of the items that it purports to create?

The Witness: All of the expense accounts which I show here are taken—the basis for the expenses which I show on pages 2 and 3 are taken from the actual experience of the telephone company as an operating unit, yes, sir.

Mr. McConnaughey: I think the answer of the witness, in spite of his cleverness in phrasing the answer, clearly indicates that what we have before us is the same thing that this Commission has repeatedly refused to receive as proof of the cost of establishing business. At any rate an inspection of the document indicates that.

The Witness: May I say just a word?

Mr. Burr: I imagine you may.

The Witness: I do not like to have the insinuation that I am clever in the record.

Mr. McConnaughey: You don't deny it, do you?

[fol. 2371] The Witness: If you refer to the item of cost of establishing business as an item on our books, I will say "No" to your question.

Mr. McConnaughey: Well, of course, I suppose you have no such an item on your books as the cost of establishing business?

The Witness: That is correct.

Mr. McConnaughey: Well, do any of these figures represent the result of the tabulation and addition—collection of items of costs from your books to produce the results that you there show?

The Witness: Oh, yes, in a large number of the items I refer directly to the actual performance of The Ohio Bell Telephone Company for the year ending June 30th, 1925.

Mr. McConnaughey: And charged to the construction accounts in that connection?

The Witness: Well, not charged to construction, no.

Mr. McConnaughey: Well, point out one of those items that you have in mind; show me just what it is?

The Witness: Take page 143, the commercial expense, of $1,396,850.00, is the expense which the telephone company had for the year ending June 30th, 1925, and it covers the expense for revenue accounting, revenue collecting, directory expense, pay station commissions and a few other small items.

Mr. McConnaughey: All of which were charged to what [fol. 2372] account?

The Witness: To the expense account.

Mr. McConnaughey: Operating?

The Witness: Yes, sir.

Mr. McConnaughey: We think it is objectionable on the same ground that such exhibits have been heretofore refused by this Commission.

Chairman Marshall: The rule has been heretofore that on the cost of establishing business the Commission has ruled out that testimony unless it is shown that the Company has actually made the expenditures. But at this time we will let him go ahead and see what develops in relation to the same and then rule on it later.

Mr. McConnaughey: Well, let it be understood that it is under the objection and will be passed on later.

By Mr. Burr:

Q. Will you take up Exhibit No. 3 and discuss, first, page 4, passing on from there to subsequent pages, explaining the method which you followed in making the computations, what is represented by the different amounts and columns on the various pages?

A. In order to arrive at the amount of plant—or probably I had better start in advance of that.

The interest during construction to which I testified yesterday, I submitted an exhibit showing a construction program or blueprint which covered a period of five years, divided into 20 quarterly year periods. This construction program has also been made a part of this exhibit and is a blue line print on white paper, and appears as page 150 in [fol. 2373] the exhibit.

The only difference between this exhibit and that which

was introduced in the interest during construction exhibit is the addition of Item 24, "General Equipment".

Using this program as a basis——

Q. Just a moment; why is there that difference between the chart shown in Exhibit No. 4 and the one covered by your interest during construction testimony? Why has the item of general equipment been added?

A. Because general equipment is an item which does not take interest during construction and was therefore omitted from the program which we used in connection with the interest during construction study.

Q. But why is it included here?

A. Because it becomes a part of the plant upon which the Company is entitled to earn an adequate return.

Q. Proceed?

A. Using this program as a basis and distributing the plant construction in a manner similar to that which was testified to in connection with the interest during construction determination, I have set up the cumulative plant and equipment which would be in service during the various quarter year periods throughout the five year period of reproduction.

In order to ascertain by quarter year periods the amount of plant and equipment which would be in service for which various elements of cost are incurred, on page five of this exhibit I show the same sort of a distribution of plant, with the exception that interest during construction and [fol. 2374] working capital and supplies are not included.

We have taken interest during construction as part of the physical property, and in this study the interest during construction has been eliminated. In other words, there is no duplication of interest charges.

On page 6 is set forth the distribution of working capital and supplies. The total working capital and supplies, as I testified to heretofore, is $6,350,000.00. This amount applies to a plant and equipment reproduction of $128,044,199.00. This makes the working capital and supplies per dollar of plant and equipment equal to 4.09 cents per dollar of plant and equipment.

This working capital and supplies is distributed in accordance with the amount of plant which is in service during any particular quarter year period.

I might say that working capital is even necessary for

property which is under construction, but I have limited the allocation of working capital and supplies to plant which is in service.

On page 7 I have set up what in my judgment would be the cost of securing contracts, advertising, canvassing and demonstrating.

If the business of The Ohio Bell Telephone Company were to be reproduced it would be necessary for the company to go out and secure 520,604 subscribers. In order to do that it would be necessary for the Company to have solicitors and carry on an active canvassing and soliciting campaign.

[fol. 2375] The Company today does canvassing and soliciting and shows on its books as of June 30th, 1925, money expended for this item.

The money expended under normal operations, however, is not wholly indicative of what in my judgment would be the cost to solicit and secure all of the 520,604 subscribers which the Company now has.

Besides these subscribers we have contracts with connecting companies. These contracts pertain to the rendering and furnishing of toll service with companies which are not part of the Bell System. The contracts also cover the remuneration for such service.

We have our own organization and contract agent, or an organization for dealing with Interest and Connecting Companies.

I have reviewed the costs of the Connecting Company department of our Company, and from such review have set up what in my judgment would be the cost of securing the number of contracts which we had as of June 30th, 1925; the number of contracts was 240.

During the past several years the telephone company have from time to time carried on demonstrations, either with respect to the use of toll lines or with respect to the explanation of local exchange service. If the property were to be reproduced similar demonstrations would be necessary.

At the present time, or as of June 30th, 1925, there were 212 multiple type P.B.X. installations, and there were 3611 non-multiple tyle installations.

[fol. 2376] It is the practice of the Company, and, in my judgment, it would be necessary to follow those practices

in reproduction, to make what we term a telephone survey in connection with many of these installations.

The telephone survey that we make involves the sending of an experienced telephone man into the premises of the subscriber, and it is his duty to make a complete analysis of all of the physical facts surrounding the installation; to make a study of the service that is being rendered to the subscriber; to make a study of how the subscriber is using that service and obtain all information which is necessary to make a complete study and analysis of the telephone usage of the particular installation. Many of these surveys have resulted in a modification of the types and class of service which the subscriber was using. Recommendations were made as to how he would be in better position to use his service by either an increase or decrease of certain classes of service.

In order to reproduce our P. B. X.'s and similar equipment it would be necessary that these surveys be made.

The telephone company has been carrying on for some time a rather active advertising campaign. I refer now to the advertising campaign of The Ohio Bell Telephone Company and in no way have considered the National advertising which The American Telephone & Telegraph Company and the Bell Securities Company are doing.

Our books as of June 30th, 1925, showed expenditures made for advertising. Those expenditures which are shown [fol. 2377] on the books of the Company under commercial expense are for the classes of advertising which would be necessary in reproducing the property, and include no advertising for employment purposes. It includes no cost for advertising for help.

Q. You say it includes no cost for that?

A. No cost. On page 7 I have set up what in my judgment would be the cost of the several items which I have briefly touched on:

The cost of advertising and soliciting being	$1,205,000.00
The cost of advertising	341,500.00
The cost of demonstrating	82,500.00
The cost of Connecting Company contracts	75,500.00
The cost of making service surveys	224,000.00
Making a total cost of	$1,928,500.00

or a figure of $3.70 per station.

I have allocated this sum in accordance with the number of stations gained per quarter year period, which gain in station is based on the amount of plant constructed and placed in service in accordance with the construction program.

On pages 9 to 44 inclusive——

Q. Mr. Schneider, before you get away from page 7, what do these amounts commencing with $1,205,000.00 and going down through your total of $1,928,500.00, represent?

A. I think I said they represented my judgment as to the cost which would be incurred in reproducing this particular part of the business.

[fol. 2378] Q. All right; proceed.

A. On pages 9 to 44 inclusive I have set out the name of the Connecting Company with which our Company has a contract, together with the name of the exchange or exchanges operated by such Connecting Company; and also the number of stations connected to said Connecting Company's various exchanges.

On pages 45 and 56 I have set up what in my judgment would be the cost of building or securing, or both, an organization of employes such as The Ohio Bell Telephone Company had on June 30th, 1925.

Now in reproducing such a property as ours it would be necessary that a large number of these employes be secured in advance of the commencing of operations of the property. That is because of the highly technical phase of the telephone business. It is made up of a large number of skilled workers. We have operators; we have plant employes and we have commercial employes who would be required to specialize in their respective activities from a telephone point of view. That is, the ordinary commercial employe, in ordinary commercial lines of business, would not be qualified to step into the telephone business without some training. The same may be said of employes who work with our plant and equipment department. No other line of business has a similar kind or character of equipment to handle and as a result it would be necessary for the telephone company to train these employes.

There is no line of business of any magnitude which would supply the telephone company with girls proficient in the

[fol. 2379] art of operating and it is therefore necessary that the Company give these girls a training.

Q. How about cable splicers?

A. When I said plant employes I referred to cable splicers, wire chiefs, switchboard men, cable testers and all the other mechanics who deal with our plant.

Now besides this we have at the present time three or more schools, excepting operators' school, which I will speak of as a special item.

The chief engineering department of The Ohio Bell Telephone Company has now and did have as of June 30th, 1925, an inspector or a director of instruction. This director of instruction has charge of what I wish to call the correspondence school. It is a little bit broader than that. Its activities are not limited to those who will be present at classes but is available to each and every employe of The Ohio Bell Telephone System throughout the State.

Now this course or this series of instructions consist of eight courses. There are 92 pamphlets issued at the present time and 10 more are in the making.

There are 56 separate subjects taught and there are over 2300 pages of matter or instructions in these pamphlets.

Q. Are the students examined with respect to the courses of study?

A. The courses are issued and the student is kept track of by means of a card system, and from time to time he is expected to take certain examinations which, after he has completed the work, are rounded up into one final examina-
[fol. 2380] tion, and if he passes it he receives a certificate covering that particular phase of the business in which he studied.

During the two years ending December 31st, 1925, the average monthly enrollment was something in excess of 550 students.

Mr. Postle: Mr. Schneider, does that schooling apply to the total of 10,171?

The Witness: That is available to the 10,000—it is available to the 12,000.

Mr. Postle: What is the practice on that?

The Witness: It is not compulsory, although the supervising officers endeavor to secure as many of the employes reporting to them to take this particular course as they can,

recommending to each individual such forms of the course which they think are essential.

Mr. McConnaughey: It is not necessary then?

The Witness: No, sir.

Mr. Tolles: It is not necessary in the sense that it is compulsory.

The Witness: Oh, it apparently is necessary from the workers' point of view, because, as I just stated, there are over 550 employes on the average who are taking these courses.

By Mr. Burr:

Q. Now the employes take these courses for a time and drop out, do they not, and others take their places?

A. Yes, sir.

Q. And those employes who are taking part of the work [fol. 2381] may at some subsequent time take another part?

A. Yes.

Q. And doesn't that happen, as a matter of fact?

A. That is exactly what happens.

Q. So that the number 500 does not mean the number of employes of the Company who have availed themselves of this service, does it?

A. No, sir. The service is available to the 12,181 employes which the Company had as of June 30th, 1925.

Mr. Postle: However, you would not need the intensive instructions on some of your plant employes as you would need on some of your traffic employes, would you?

The Witness: If we were to reproduce those plant employes that we have today we probably would secure our better grade of help from some other source. That would be, in my mind, the only logical way to get those particular grades of help.

The cable splicers, the test men, the trouble men, and that character of labor, we probably would have to train, because of the large number necessary in the business.

My Mr. Burr:

Q. In passing, and for Mr. Postle's information,—he may be interested in it—how long does it take to make a cable splicer out of a green man, if you know?

A. Well, it is almost the same length of time it takes to

make a plumber. Now plumbers are made in a few years or ten years, depending on the calibre of the man.

Q. Can you approximate the minimum time required by the ordinary man in your company who becomes a cable [fol. 2382] splicer; that is, the minimum time required in that sort of work before he becomes himself a cable splicer?

A. Oh, I think on an average of three years would be a fair figure for the production of a first-class cable splicer.

The cost of training such employes that have availed themselves of this course is in excess of $200.00 per employe.

Now besides the activities of this director of instructions, who is in the chief engineer's organization, we have at the present time a transmission school in Cuyahoga Falls. The object of this school, as I understand it, is to give such employes whom we feel are capable of more responsible positions—fellows who are capable of advancing in the business—an opportunity of acquiring additional information and education along the lines which our supervisors deem necessary.

Now we have had one school which closed several months ago and there is one now going on. And, from such information as I have had available and figures that have come to me, the cost of educating these fellows in that school is in excess of $1000.00 per each.

Now besides those two factors which enter into the training of our employes we have plant schools and we have schools which the commercial department maintain for the education of their employes, particularly along the lines of their own activities. That is, the education is not of a general character, but somewhat more of a special character.

We are also each year acquiring or getting a considerable [fol. 2383] number of graduates from technical schools, such as The Ohio State University, Purdue, Michigan, and many others. Now these students I understand are taken into the organization at a salary of around $125.00 a month. They are placed in one of the departments of the company and they nose around for themselves and follow the activities of the particular department that they are placed in for a certain length of time. Then they are transferred to another department, and so on until they have a general insight of the telephone business as transacted by our Company.

Now all of the money paid to those students is non-productive so far as work or service is concerned, although the

Company feels that it is productive insofar as it is producing what it feels will be a valuable employe in the future.

Now all of the salary or all of the salaries so spent and paid out by the Company are, in my judgment, charges directly to the training of the employe.

Chairman Marshall: What if some of the students quit?

The Witness: That is just money lost. It is that inevitable turnover that we have in any line of business, although as far as I know our loss of students acquired from technical universities and colleges is negligible.

Chairman Marshall: All right; go ahead.

The Witness: Although such losses as might occur would be properly chargeable to the employes that remain; because it is the same in any business, a certain amount of [fol. 2384] turnover must be carried by those who remain.

The most difficult in respect to time would be the training of operators. These operators are the only class of employe that comes in direct personal contact with the public, so to speak. We carry constant ads in practically all the large cities in the newspapers relative to the hiring or the application of operators.

Now these operators on filing their applications are checked up relative to their character, and if everything appears to be all right relative to that particular point, they are then given a physical examination, and from then, if their physical condition is satisfactory, they are passed into a school.

Mr. Williams, in his inventory and appraisal, has reproduced a considerable amount of school equipment, and that school equipment is the equipment which is used for training these operators.

Now the girl is given a couple of weeks of elementary training. She is then put on school switchboards and eventually is placed on part-time work, or evening work, on the main switchboards of the company.

Now as this girl progresses from one who is just employed to the time she goes into the switchboard, she will have advanced from a zero percent efficient operator to some percentage less than 100.

It usually takes, and has been the experience of the Telephone Company, that it takes at least 16 months to make an average efficient operator.

[fol. 2385] Now during the time that she is in her training

or as a student, that is all charged as training. After she leaves the school and becomes a partially active operator, certain portions of her salary or wage are chargeable to operations, and the other part, in my judgment, should be charged to training, and that is the way I considered such costs in connection with the reproduction of our organization.

Now eliminating such employes as matrons and janitors, certain classes of clerks whose cost of training would be nil, I have found that it would be necessary to train or secure at least 10,171 employes.

Q. What do you mean by student operators in the statement which appears under the figure "Total 10171", on page 145?

A. Those are the girls who are in the school or were in the school at the particular time, June 30th, 1925. Those, in my estimation, that are in the school would be charged to operating expenses as this plant is developed. It is in the operators who have already been trained and who are in a position to give service to the public that the Company has already invested its money.

Q. I see.

(No reply.)

Mr. Postle: Mr. Schneider, how does the service compare today with what it did say at the time, in 1921, when the present company took over the other company?

The Witness: Well, I could not tell you that, Mr. Postle, but I think that the people who have charge of the service here can give you some idea of that.

[fol. 2386] Mr. Postle: Do you mean some other witness who will follow you?

The Witness: I don't know whether there will be another witness follow me along on that particularly subject but we surely must have some kind of a measure whereby that can be arrived at.

Mr. Burr: Are you speaking with particular reference to Columbus, Mr. Postle?

Mr. Postle: Generally; the complaint I get is pretty general about poor service.

The Witness: We have various kinds of service, the commercial service, our relation with the public; that is one factor of service. Then there is the service which we render in a traffic way, as the service over the lines. Now I think

the traffic part of it can be measured and comparisons made, but I don't know how the other service——

Mr. Burr: We will undertake to provide that information for you if you ask for it at some later point in one of the other hearings.

Mr. Postle: All right.

By Mr. Burr:

Q. Proceed, Mr. Schneider, with your discussion of page 45?

A. Now, as the property is constructed and cut into service the Company gradually will emerge from construction activities to one of rendering service. And after reviewing the list of employes which I feel, and which in my judgment I deem necessary to reproduce this business, probably 60 per cent at least of these employes would have to be trained [fol. 2387] prior to the rendition of any kind of service.

Now there are 149 exchanges besides approximately 7,000 miles of toll route, and this property will not all be cut into service simultaneously; it will follow probably a progressive program.

Now I have computed the cost of training the number of operators—full fledged operators, which this Company had as of June 30th, 1925, as $1,263,750.00.

I have computed what in my judgment would be the cost incident to securing or training, or both, of all other employes to be $633,360.00, making a total of $1,897,110.00.

Q. Which represents your judgment as to what?

A. It represents what in my judgment would be necessary in the line of expenditures for the training, the securing, or both, of an organization of trained and skilled employes which this Company had as of June 30th, 1925.

Now taking 60 per cent of that, which in my judgment would be proper as chargeable to the cost of establishing the business, in my judgment the amount of $1,138,266.00 would be necessary.

On page 46 of this study I have shown the distribution of such training costs by quarter year periods, and the basis of such allocations.

Q. Do these per cents at the bottom of page 45 represent your judgment as to the number of employes; that is, the number or per cent, I should say, of employes who would be necessary to train during the first year and the second, third and fourth years respectively?

[fol. 2388] A. After studying the construction of the property and rapidity with which the plant is placed in service and the number of central offices which will be completed and ready for service, it is my judgment that the amount expressed as percentage of the costs, as indicated on the bottom of page 45, would be necessary.

Now the question might be asked why I do not train all the employes or secure all of the employes. That I have done in the figure of $1,897,110.00; but a certain number of those employes will be secured before any service is rendered.

Now as soon as service is rendered by an exchange or by any particular toll route, then any employes who are taken into that particular system would be chargeable to operating expense.

I have therefore eliminated that portion of the securing or training which is chargeable to expense in connection with this particular study.

On page 47 I have set up what in my judgment would be the cost to reproduce the instructions, the routines, the records, the specifications and forms, in the possession of The Ohio Bell Telephone Company as of June 30th, 1925.

Now in reproducing our property the workers necessarily would have to have certain tools, certain plans, certain methods and certain specifications in front of them. Now any plans or specifications or routines furnished to this Company by The American Telephone & Telegraph Company are not included in this study.

[fol. 2389] An employe, before he can work efficiently, must necessarily have some idea of the standards to be followed. He must have some knowledge of the plant with which he is to work. He must have some idea of his position in the organization in order that a logical routine may be followed. All of these particular items would necessarily have to be supplied prior to any time at which service is rendered, and, since there are no revenues, such expenditures as would be made for these particular items would be a fixed capital charge, or what I deem part of the cost of establishing this business.

The amount which, in my judgment, is necessary to reproduce those instructions, routines, etc., as of June 30th, 1925, is $251,000.00, distributed by quarter year periods as indicated on this page.

Now pages 48 to 137 inclusive contain a list of some of

the specifications and routines, records and forms which the Company was using in transacting its business on June 30th, 1925, and which would be necessary were the Company to be reproduced as of that date.

Mr. McConnaughey: You have in mind there, I assume, the cost of getting that information together in the form of an instruction, not the printing and distributing of it or anything of that sort?

The Witness: It would be the expense of the salaries paid to people who, in my judgment, would be competent to handle the subject matter of the specification or record and prepare it in its form ready for use by subordinates.

[fol. 2390] I might add that a dollar a station is a reasonable figure for an inventory and appraisal of any telephone plant, and an inventory is nothing more nor less than a record of its plant.

At a dollar a station for just that record would mean $520,604.00 for that property, which is over two times the amount that I have used for that particular item.

By Mr. Burr:

Q. What do you mean by the expression "a dollar per station for the inventory"?

A. We have in the past made a large number of inventories—appraisals, and in checking up that expense we find that it varies from around 75 cents to $1.25, depending on where the property is located and the development of that property on a per station basis.

Q. You now refer to a full field inventory.

A. That is correct; and the records which we have and which Mr. Williams testified to as having used in connection with his inventory are the kind of records we have. They are field sheets.

Mr. Burr: Does the Commission care to have Mr. Schneider discuss in detail any of the routines listed in pages 48 to 137 inclusive?

Chairman Marshall: No.

The Witness: On page 138 I have set up what in my judgment would be the amount of money necessary for directory costs incident to the establishment of service initially throughout the State of Ohio relative to the exchanges operated by this Company. The costs which I used are based

[fol. 2391] on the actual experience of the Company together with such modifications which in my judgment would make the figures applicable for reproduction.

Now as an exchange property is built there comes a time when service is about to be established. In order to give reasonable and satisfactory service and not create a chaotic condition of service it is necessary and essential that a directory be in the hands of those subscribers who will receive initial service. Now that directory expense is incurred prior to the time when the Company is receiving any revenues, and that being the case the only place that those expenses can be charged for would be as part of establishing the business.

In connection with these costs I have used a cost of 15 cents per station, using the station as a unit.

The number of stations to which this cost will apply will be half of the total number of stations which we are serving or which we were serving as of June 30th, 1925.

Commissioner Maullar: What proportion of the cost of a directory does the advertising pay, do you know?

The Witness: I do not think I have, Mr. Commissioner, any figures of recent years on that. That can be obtained for you if you desire. Of course the question of advertising in directories, particularly preliminary directories, is something which must be studied independently of the situation as we have it today. The directory we have today is an advertising medium. Whether a preliminary directory [fol. 2392] would be as desirable an advertising medium is a question.

Commissioner Maullar: Your practice is when you get out a directory to allot a certain portion of it to advertising; isn't that true?

The Witness: They take advertising, both the general and the classified type, in our directories, yes, sir.

Mr. Postle: Mr. Schneider, I don't understand why you used half of the number of stations as of June 30th, 1925, upon wnich you figure 15 cents per station?

The Witness: In my opinion and judgment an exchange property will be ready for operation, or it will have acquired 50 per cent of its total number of subscribers at the time that it is ready to give initial service. The remaining 50 per eent of subscribers, their directory charges will be treated as operating expense and therefore do not appear in this study.

By Mr. Burr:

Q. What does the amount of $39,044.00 represent?

A. That represents what in my judgment would be necessary to cover the item of preliminary directory costs in connection with the reproduction of the business of this Company.

Mr. McConnaughey: Well, what is the relation of that figure 70,282 to the situation if you used the other figure of 250,000 to determine that; that is in the twelfth quarter, page 138?

The Witness: 70,282 in the twelfth quarter?

[fol. 2393] Mr. McConnaughey: Yes, you say the stations for which the preliminary directory work is necessary are various numbers at different periods, running up to 70,282, and there you stop. Now you say that the number of stations that there must be in use before a company is ready for operation—is that it—would be about half of its number?

The Witness: Yes; that is after the 12th quarter year period there will not be any charges for preliminary directories; there will be charges for directories but not preliminary directories, since our exchanges will be operating and giving service.

Mr. McConnaughey: Well, what would that 250,000 figure have to do with it? I don't understand the relation of that to your statement.

The Witness: 250,000?

Mr. McConnaughey: 260,000.

The Witness: That is half of the number of stations which the telephone company operated as of June 30th, 1925, and my premise in connection with this study is that at the time service is given in any particular exchange 50 per cent of the subscribers will be on that initial list. Therefore the initial list of all exchanges would total 260,302 subscribers, or half of the total.

By Mr. Burr:

Q. And the numbers of subscribers shown in the second column of figures on page 138 represents your judgment as to the number of subscribers to be acquired during the 12

quarter year periods of the first three years; is that correct?
[fol. 2394] A. That is right. That represents the stations for which preliminary directory work will be necessary.

Q. But they are acquired in the order or in the amounts shown in the second column of figures on that page, are they not?

A. Rather than answer your question, I would like to explain that.

The average number of stations in service, which you will note in previous exhibits, started in the third quarter. The preliminary directory work is necessary prior to that time. So I am showing here work for preliminary directories on stations one quarter year period prior to the time at which service is rendered for those stations.

Q. But with that exception the column shows just what I said it did?

A. Yes, that is right.

Q. Proceed.

A. Now when a telephone property such as the Ohio Bell Company is being reproduced there are many kinds, classes and types of plant and equipment erected. We have buildings, central office equipment, poles, wire, cable and underground structures.

Now before service is rendered that property which is erected is subject to the ravages of the elements. It is subject to the normal wear, tear, rust, rot and decay and for all practical purposes may be considered in the light of maintenance as such property which is rendering service, with the exception of such expenses which are incurred for repairs in order to restore service are not incurred while this plant is under construction.

[fol. 2395] But the Company will experience, as it constructs its property, requests from cities, municipalities and highway commissioners that it move its poles and relocate its property in localities. It will be subject to the request of owners of garages to move its poles and wires at times to make way for the erection of a garage or for the opening of a driveway into a certain piece of property.

Now all these expenses have not been in any way included in any of the figures heretofore testified to but they are expenses which this Company will incur or would incur if it were to reproduce its property as of June 30th, 1925.

Now for such property that has been erected and in serv-

ice we will have that maintenance expense which is based on the actual experience of the Company relative to that expense.

For the year ending June 30th, 1925, the Company had a toll and exchange plant maintenance of $3,237,710.00. That expense does not include anything for supervision, nothing for depreciation and nothing for station removals and changes.

The average plant in service to which this maintenance is applicable is $124,872,745.00.

Q. Derived how?

A. That was arrived at by using Mr. Williams' Exhibit No. 9, Line 9, the amount of $128,044,199.00, from which was subtracted the plant and general equipment, not additions, for the period January 1st, 1925, to June 30th, 1925; that [fol. 2396] would give me what I would consider, and what reasonably reflects the average plant to which the maintenance expense was applicable. That value, or amount, was as I stated previously.

The ratio of plant maintenance expense to average plant for the year ending June 30th, 1925, was 2.5928 percent, or .6482 percent per quarter year period.

Making allowances for such plant which was constructed but not in service I have indicated on page 140 the total maintenance by quarter year periods which would be incurred by the property both in service and under construction for those respective quarter year periods.

Q. On what is the amount of property in service in those periods based?

A. It is based on the amount of plant shown on page 4.

Mr. Tolles: It is based on your construction program, isn't it?

The Witness: Yes; the plant which I show on page 4 of this study is based on the construction program.

By Mr. Burr:

Q. Proceed.

A. On page 141——

Mr. McConnaughey: Just a moment; have you used the same percentage of maintenance expense to plant in place all the way through there?

The Witness: I used on average plant in place and in service the percentage as indicated on page 139.

Mr. McConnaughey: That is 64.82?

The Witness: Yes, sir.

Mr. McConnaughey: Of one per cent?

The Witness: .6482 per cent.

[fol. 2397] By Mr. Burr:

Q. Proceed.

A. On page 141——

Mr. Tolles: If that is a new subject you did not give your figures on this one.

The Witness: In connection with this study, Mr. Tolles, there is no total.

Mr. Tolles: I see. Proceed.

By Mr. Burr:

Q. Proceed.

A. On page 141 I have indicated what in my judgment would be the amount of money necessary to cover the item of station removals and changes in connection with the reproduction of this Company's business.

During the partial operation of the property, and as stations are acquired, the Company will incur that inevitable station removement cost which at times we have tried to obtain compensation for through service connection charges but never have been successful. The station removal and change expense for the year ending June 30th, 1925, was $803,210.00.

Q. Mr. Schneider, interrupting you at this point, what Mr. Tolles' last question had reference to was the last column of figures on page 140; what do those figures represent?

A. Those figures represent the total plant maintenance for the various quarter year periods indicated in Column A.

Q. And they are carried forward to Sheet 2?

A. That is right. I will tell later how these figures are used in connection with the summary sheet.

Q. Now will you return to your discussion of station removals and changes as to which you had already gotten [fol. 2398] down to the point of expending an amount of $803,210.00?

A. This class of expense represents the expense which the Company experiences through the handling of its transient type of equipment; that is, the subscriber's instruments.

The number of stations in service to which the $803,210.00 applies was arrived at by taking the average of the number of stations in service as of June 30th, 1924, and the stations as of June 30th, 1925.

Q. When you say "stations" you mean the stations of the Company in service as of those dates?

A. Yes, sir; which average is 511,766 stations. The average station removal and changes expense per average station per year is $1.56 plus, or 39 cents plus for quarter year period.

Q. Per average station?

A. Per average station, yes, sir; the 39 cents plus per station applied to the average number of stations in service, which in my judgment would prevail throughout this five year reproduction period, yields the total station removal and changes expense by quarter year periods throughout this five year construction period, and is shown in the third column of figures.

The traffic expense which this Company incurred for the year ending June 30th, 1925, is set forth on page 142 in the amount of $6,520,350.00. This figure does not include anything for traffic superintendence.

The number of stations in service to which this expense applies was an average of 511,766.

[fol. 2399] Dividing the traffic expense by this number of stations gives an average traffic expense per average station per year of $12.74, or a traffic expense per average station per quarter year period of $3.185.

The station was used as a unit because that unit is more adaptable for the purpose of ascertaining traffic expense than is any other unit which could be used in connection with a study of this character.

The total amount of traffic expense for the various quarter year periods throughout the reproduction is indicated in the third column of figures.

Q. How did you arrive at the average number of stations in service shown in the second column of figures?

A. In the same manner as expense in connection with station removal and changes expense.

Mr. Postle: Do I understand, Mr. Schneider, looking at Column 2, that it would be a half year before you have any stations in service?

The Witness: Yes. I think in connection with my interest during construction study that I testified that it would be at least six months before any of our exchanges would be in a position to render service.

On page 143 I have set forth the commercial expense for revenue accounting, revenue collecting, directory expense, pay station commissions and a few other minor accounts, but have excluded advertising, canvassing and sub-licensee relation expense. I have also excluded the commercial administration expense.

[fol. 2400] This net expense set forth on page 143 in the amount of $1,396,850.00, divided by the average number of stations which were in service during the year ending June 30th, 1925, gives an average commercial expense per average station per year of $2.729 plus, or a commercial expense per average station in service per quarter year period of $0.682 plus.

The amount of commercial expense which in my judgment would apply throughout the various quarter year periods of the reproduction period are indicated in the third column of figures on this page.

Mr. McConnaughey: You mention directory expense there, Mr. Schneider. Have you avoided duplicating that directory expense on a separate page over here?

The Witness: The directory expense which I speak of on page 138 refers to the preliminary directories or directories which are published prior to the rendering of service.

The directory expense which I included on page 143 is that expense which applies to stations which are in service, and provides for the continuing run of directories.

Now in connection with all of the expense items which I have enumerated we have, for the traffic, the traffic superintendence; for the maintenance, plant supervision; for the commercial, commercial administration, and over and above these three types of administration we have the general supervision or general expense.

[fol. 2401] Now the plant supervision which I have included in this study is that amount of plant supervision which is treated as an operating expense and in no way duplicates that plant supervision which Mr. Williams has

considered in connection with the building of the physical structure.

The general expense which applies to the operation of the property does not include any of the expense which I testified to as being applicable to the construction of the property; there being no duplication whatsoever.

Now for the year ending June 30th, 1925, the administration expense or the expense for those items which I have just enumerated is in excess of 20 percent of the direct expenses.

Now in the second column of figures, under the title "Direct Expenses", I have summarized all of the expenses which I have heretofore testified to, to which I have applied 20 percent for the item of administration.

The amounts for administration therefore which, in my judgment, are necessary in the reproducing of this property are indicated in the third column of figures.

The next item for consideration is uncollectable revenue. This is not an expense item; it is a deduction from income, so to speak, but I have treated it here rather in the light of expense.

The telephone company does not collect all of the money to which it is entitled for the rendition of service. There is a certain amount of such revenues which in the course of operations becomes uncollectable, owing to bankruptcies, [fol. 2402] people leaving their residences and leaving no forwarding address, and people who become indignant, etc.

Now the amount, in simulating or reproducing what in my mind is a reasonable allowance for uncollectables, and the amount that I have used in this study, is less than that actually experienced by the Company. I have indicated in the third column of figures my judgment as to the amount of revenue which will be uncollectable in the reproduction. This is based on 20 cents per station per year.

Q. And on the same average number of stations in service per quarter as previously testified to?

A. That is correct. The ratio of uncollectables would be 20 cents divided by $69.65.

Mr. McConnaughey: What is that $69.65?

The Witness: That is a figure that I will testify to later on. That is not quite .3 of one per cent.

The next item which must be considered in the reproduc-

tion is set forth on page 146 and consists of the personal property and real estate taxes.

No consideration has been given here for the excise tax, the Federal income tax or The Public Utilities Commission of Ohio tax. The taxes that I have considered here apply to property only; the other three types of taxes are dependent primarily upon income or revenue.

During this hearing I testified to the taxes which in my judgment were proper for reproducing the physical structure. The taxes that I am now about to testify to pertain to those taxes which in my judgment are chargeable to [fol. 2403] operations and in no way conflict with or duplicate any of the taxes which I have testified to heretofore.

The ratio of taxes actually paid on the property owned by the Company as of January 1st, 1924, was in excess of 1.19 percent.

Now in my testimony relative to taxes during construction I used a rate of 1.3 percent. The difference between the rate indicated on page 146 and the 1.3 percent is accounted for by the fact that the base which I have used for my computation on page 146 includes the interest during construction item which was omitted in the testimony previously referred to. This 1.19 percent I have set up on an accrual basis. The Company does just that thing. It anticipates what its taxes will be for the year, and on the basis of this anticipation accrues its taxes; that is, sets up a sum monthly or some other period of time in order to anticipate its payments.

Now the amount of property in service, excluding property in process of construction which had been considered in connection with the building of the physical property, is indicated in the second column of figures under Column B.

These figures were computed, as referred to previously, in accordance with the construction program.

To these amounts of property, as indicated by the several quarter year periods, was applied the rate of .2975 percent, being the tax accruals which the Company in reproduction would set aside for each quarter year period. The .2975 [fol. 2404] percent may be expressed as .002975 as a decimal.

Mr. Tolles: That is what I was quarreling about; I thought there should be one nought.

The Witness: Another element of cost to be considered in reproduction is that of rent. As I testified in my in-

terest during construction testimony, it would be necessary for the Company wherever it is operating exchanges and where it does not own its own land and buildings, to rent or lease some quarters wherein it may house its central office equipment. That is the first thing it would have to do in any one of its exchange locations where this situation exists.

The renting or leasing of this property would be the first move in the exchange. The central office equipment would then be ordered and installed.

Now during this interim it would be necessary for the Company to pay the owner a compensation for the use of that property. We also rent conduits, wires, poles and circuits in cables owned by other companies. In the construction of our physical property we would have to do the same thing. And I have considered such payments.

Now for the year ending June 30th, 1925, the Company paid rents amounting to $295,250.00, which may be divided into $262,050.00 for rent deductions for telephone offices, and $33,198.00 for rent for conduit, pole and other supports.

From the program of construction which I have set up for this property I determined the rents paid for telephone [fol. 2405] offices as indicated for the various quarter year periods numbering from 1 to 20.

It will be noted that from the 10th quarter year period through the 20th quarter year period the rents paid for telephone offices remain constant. In other words, all property or all buildings used in the housing of central office equipment or the housing of departments of the Company will be in use.

The rent paid for conduit, pole and other supports is based on my construction program and is based on the amount of property for which such rental was paid.

The total rents paid for these two classes of plant are indicated in the last column of figures under "Total rents".

Q. Will you take up next the item of depreciation of plant and equipment shown at page 148 of your study?

A. On page 148 of this study I have set forth what in my judgment is the amount necessary to reproduce this element of value or that part of this element which represents a portion of the value of this property.

The telephone company as soon as it instal-s property, whether it is buildings or wire or poles or cable, has the

expense of depreciation, or it must allow for such property which is being consumed. The property is consumed in two ways; it is consumed in rendering service and it is also consumed by the mere matter of fact of having been installed and being subjected to the ordinary elements of wear, tear, rust, rot and decay.

It must meet all municipal requirements relative to mov- [fol. 2406] ing, relocating, etc. It must provide for the element of storm, damage and other contingencies.

These factors of depreciation occur whether the property is rendering service or whether it is in the process of construction. However, the plant which is under construction but not yet in service, in my judgment, will not need as much reserve set up to compensate for the items I have mentioned as would be the case for plant and equipment which is rendering service.

Now I have determined the requirements for depreciation and amortization of landed capital as a rate of 5.56 percent per annum, or a quarter year period rate of 1.39 percent.

The rates apply to all of the physical property which the Company would necessarily have to reproduce.

In the second column, B, I have indicated the average plant in service for each quarter year period.

In Column C I have indicated the amount of depreciation on plant and equipment which is in service.

In Column D I have indicated the average plant constructed but not in service.

In Column E I have indicated the depreciation of plant and equipment which I believe is necessary in the reproduction of the plant.

Column F, which is equal to the sum of Column E and Column C, represents the total depreciation of plant and equipment which in my judgment would be incurred in the reproduction of this plant or property.

[fol. 2407] Q. The next item to be discussed is that of operating revenues, shown on page 149; will you please proceed with it?

A. In reproducing the physical property and business it is necessary that the Company meet all of its expenses and have an excess of revenue over and above such expenses that an eight percent return may be attained.

Any public utility property, in order to secure money freely, should be entitled in my judgment to an eight per-

cent return or more. I have used eight percent in this study.

The amount of expenses which must be earned at the end of the five year reproduction period is $23,848,700.00.

The amount of money necessary to pay an eight percent return at the end of reproduction is $12,412,989.00.

These two figures added together give the total exchange and toll revenue which will be required to yield an eight percent return and pay such expenses. This sum is $36,-261,689.00.

Now in accordance with the program which I have discussed——

Q. That $36,261,689.00 is that much per year, is it not, for a year?

A. Yes, sir.

Q. Proceed.

A. In accordance with the construction program which I have outlined heretofore there will be no revenues collected owing to the fact that no service will be rendered until the third quarter year period of the first year. After [fol. 2408] that the revenue collected will be that as indicated in the third column of figures on that page.

The number of stations which this Company had on June 30th, 1925, was 520,604.

The total revenue per station required to yield an eight percent return per year was $36,261,689.00, divided by 520,604, or $69.65 plus, or a revenue per station per quarter of $17.41 plus.

The exchange and toll revenue required therefore, in my judgment, would be that indicated in the third column of figures.

Chairman Marshall: We have reached the adjourning hour. We will have to vacate the assignment of this case for the 12th of February as that is a legal holiday. It will be held on the 10th and 11th. Is that satisfactory?

Mr. Burr: Yes, sir.

Mr. Burr: We desire to offer in evidence a copy of the Joint Resolution of the General Assembly of the State of Ohio memorializing Congress to eliminate dual telephone service. It is to be found in 109 Ohio Laws at page 629. I am not sure that it appears in any of the bound volumes of the General Code, so I offer a copy of it in evidence as Company Exhibit "A".

And thereupon the Document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Company Exhibit "A".

[fol. 2409] Q. Mr. Schneider, at page 45 you show cost of training and securing the above force as follows: Operators, $1,263,750.00; other employes, $633,360.00; what is your authority for those amounts?

A. The operators, the actual experience of the Company; the other employes, are what in my judgment will be the cost of securing or training them.

Mr. McConnaughey: Where do you get that actual experience, Mr. Schneider?

The Witness: The cost of training the operators is a separate item.

Mr. McConnaughey: And is that for some certain period; money expended for some certain period?

The Witness: That is taken prior to 1925, about a year prior; considering a year prior to 1925.

Mr. McConnaughey: How did you get it, by multiplying the number by the cost per person?

The Witness: It is an operation of taking the girl from the time of application through her training period up to the point where she attains the efficiency as we have of all our operators, that is, average efficiency, and it includes the cost of advertising for the applicant, the medical examinations, the turnover in students and the turnover when they become operators.

Mr. McConnaughey: Does that total amount appear as a total of those various items in that account on your books or is it made up by gathering these items from various sources and adding them yourself?

The Witness: It is made up from gathering the figures [fol. 2410] from various sources.

Chairman Marshall: We will adjourn at this hour until Wednesday, February 10th, 1926, at ten o'clock A. M.

And thereupon the further hearing of this cause was adjourned until Wednesday, February 10th, 1926, at ten o'clock A. M.

[fol. 2411] Morning Session

Wednesday, February 10, 1926.

And thereupon the further hearing of this matter was resumed, pursuant to adjournment, before Honorables Charles C. Marshall, Chairman, George T. Poor and Frank B. Maullar, Public Utilities Commissioners.

Present:

Messrs. Karl E. Burr and S. H. Tolles, on behalf of The Ohio Bell Telephone Company;
Messrs. W. S. McConnaughey and Fred W. Postle, Special Counsel, On behalf of The State of Ohio;
Mr. Henry M. Hagelbarger, Director of Law, On behalf of The City of Akron, Ohio;
Mr. J. B. Harshman, Director of Law, On behalf of The City of Dayton, Ohio.

[fol. 2412] And also WALTER G. SCHNEIDER, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. At the close of the last hearing you had finished the discussion of the details of your exhibit number 3, the last subject having been that of the operating revenues shown at page 149; that is correct, is it not?

A. Yes, sir.

Q. Will you please turn back to pages 2 and 3, and explain to the Commission how you have summarized your previous testimony?

A. The details which I covered in my testimony previously outline in a general way the various factors, the various costs which must be considered and which would be incurred in reproducing the business of The Ohio Bell Telephone Company.

The amount to be considered of the various items which I have enumerated and the extent to which they are to be considered is outlined on pages 2 and 3 of my exhibit number 3, which pages constitute a summary.

Page 3 is just a continuation of page 2, covering the quarter-year periods from 11 to 20; so that I will limit my testimony to sheet number 2.

Q. With the understanding that what applies to it also applies, with equal force, to sheet number 3?

A. Yes, sir. On line one, "property in service at begin-
[fol. 2413] ning of quarter-year period", that item is taken from line 19 of the preceding quarter-year period.

The item, line 19, I will develop as I explain the exhibit.

Item 2, "Plant additions during quarter year period" are taken from page 5 of this exhibit to which has been added the working capital as outlined on page 6.

Item 3, "Interest on property and plant additions at 2 per cent per quarter", which is equivalent to 8 per cent per annum, is taken as 2 per cent of line one of the same column, and 1 per cent of line 2 of the same column. I used 1 per cent on item number 2 because item number 2 expresses the expenditures made throughout the quarterly year period. That is the expenditure would range from zero to the maximum. So that the average would be the figure indicated in the respective columns under line 2, divided by two.

Q. And it is on the latter amount that you have computed the interest?

A. That would be equivalent to taking 2 per cent of the average or one per cent of the total. Line 4, "Advertising, Canvassing, Soliciting and Contracts" represents the costs which I have testified to heretofore on pages 7 and 8 of this exhibit.

Line 5, "Securing and building an organization of employees", is a tabulation of the costs testified to heretofore on page 46.

"Instructions, routines, etc.", which are set forth on line 6 have been transcribed from page 47 of this exhibit to which I testified in the last hearing.

[fol. 2414] "Preliminary directorates", line 7, is a tabulation of such costs as I testified to previously, and are shown on page 138 of the details.

"Plant maintenance", line 8, are taken from Column F of page 140 of the details, which I previously testified to.

Line Number 9, "Traffic expense" is a summarization of the expenses of that character, which I testified to previously, and are set forth in detail on page 142.

Line 10, "Commercial expense" is the expense as designated on page 143.

Line 11, "Station removals and changes" is a tabulation of the details as shown on page 141.

Line 12, "Administration", is a summarization or tabulation of such expenses as were testified to in connection with the details on page 144.

Line 13, the item of "Rents" is a summarization of the details as testified to in connection with page 147 of this exhibit.

Line 14, "Uncollectible revenue" represents a summarization of the uncollectible revenues as outlined on page 145.

Line 15, "Depreciation of plant and equipment" is a summarization of such expenses as were testified to previously and set forth on page 148, column F.

Line 16, "Taxes", represents such amounts as I testified to on page 146.

Line 17, "Total property, plant, interest and expenses" is the total of lines 1 to 16 inclusive.

Line 18 sets forth the operating revenues which were [fol. 2415] testified to in detail in connection with page 149.

Line 19, "Property at the end of the quarter year period" represents a subtraction of line 18 from line 17.

Now this summary indicates the weight and consideration that is given to the various details of costs which in my judgment enter into the question of the cost of establishing business.

Q. For what company?

A. For The Ohio Bell Telephone Company as of June 30th, 1925.

The process of working to the total cost may be outlined as follows:

The property added during a particular quarter year period, together with the interest on that property and such items of expense applicable to plant under consideration but not in service, together with such items as are necessary for advertising, canvassing and the securing of employees, instructions and so forth, are in every case summarized and indicated on line 17.

As the various exchanges are opened and service is rendered the company starts to collect some revenue. The revenue will be deducted throughout the various quarter year periods so that the net result from deducting revenues from expenses, interest and plant, will produce a figure which represents the property value at any given quarter-year period.

On page 3 under the column "Total, End of Period", the

computation indicates that the expenses plus a fair return [fol. 2416] which I have adopted, being equal to 8 per cent, are equal to the revenues; in other words the cost of establishing the business ceases at the end of the twentieth quarter-year period, or at the end of five years.

The amount of property which in my judgment the Ohio Bell Telephone Company had as of June 30th, 1925, including the cost of establishing the business, is indicated on page 3, line 19, under the column with the caption "Total, End of Period", as $155,162,357.

To ascertain or determine the amount or cost of establishing business included in that figure, I have subtracted the plant additions during the quarter year period, the sum being $126,912,935, plus the interest during construction amount of $7,481,264, leaving what, in my judgment, is the cost of establishing business amount, of $20,768,158.

Q. Which represents what?

A. That represents the cost of establishing business of The Ohio Bell Telephone Company as of June 30th, 1925, and represents my best judgment as to that cost.

Mr. Burr: We offer Schneider Exhibit Number 3 in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Schneider Exhibit Number 3.

[fol. 2417] Q. What, if any, relation is there between the cost of establishing the business of The Ohio Bell Telephone Company and what is commonly known as going concern value, if you know?

A. In some cases, and some text book writers treat the cost of establishing business and the going concern value as being synonymous, or mutually inclusive. Others treat cost of establishing business and going concern value as being mutually exclusive.

I consider the cost of establishing business as part of the going concern value.

Going concern value, however, contains or includes considerably more than this cost of establishing business. It includes all of the items which I have enumerated on page 1 of my exhibit number 3, such as preliminary organization, legal services, during the preliminary period, the cost of

financing, preliminary engineering and survey costs, the cost of securing franchises, the cost of preliminary development; it also would include any services rendered by the American Telephone and Telegraph Company which would be rendered in connection with the reproduction of the property.

Q. None of those you have taken into consideration in evaluating the cost of establishing the business?

A. None of the items which I have just enumerated have been included in the cost of establishing business, although they are part of the going concern of this property.

Q. What other elements——

A. There is an additional element which might be said to be the risk of the business.

[fol. 2418] In reproducing the property over a period of five years there is the element of risk or contingency which inheres in that program until the property shall have been completed. And as the property is completed and its business established, and the company is earning money, the value of that risk is in the property and in my estimation is of some consequence.

Q. Have you attempted here to evaluate the going concern value beyond the cost of establishing the business?

A. I have not. The cost of establishing business which I have testified to is not my estimate or my judgment as to the going concern value of this property. The going concern value is materially in excess of the cost of establishing business which I have heretofore testified to.

Mr. McConnaughey: Do you mean that that one item is more than twenty million dollars, or that there is something to be added to the twenty million dollars for going concern value?

The Witness: I mean that the going concern value of the property is in excess—materially in excess of the twenty million odd dollars that I have testified to.

Commissioner Maullar: But the twenty million dollars would be a part of it?

The Witness: That is correct.

Mr. Burr: You may cross-examine.

[fol. 2419] Cross-examination.

By Mr. McConnaughey:

Q. I just want to ask Mr. Schneider one question at this time about this exhibit. I did not understand where you got the amount of $7,481,264 in your final calculation.

A. That comes from my exhibit number 2—my exhibit number 2, Mr. McConnaughey; that is the interest during construction.

Q. Oh, I see; it is not on this sheet?

A. No, sir.

Q. I was looking for it here.

A. No, it is not there. I might explain in connection with that figure that I have used 8 per cent as indicated on line 3, that being, in my estimation, the minimum return which a public utility should receive. That return of course would be split up into various parts, part of it being for interest, and part of it being for return, and part of it being for surplus, and part of it being for profit, and part of it being for contingencies. And in order to have no duplication, I have allowed, as you called my attention on page 3, for the interest during construction amounting to seven million odd dollars; there being no duplication. I think you will find that on the last page, Mr. McConnaughey.

Mr. McConnaughey: I see.

Mr. Burr: Mr. McConnaughey, I understood at the last hearing that you wanted to cross-examine Mr. Schneider at least preliminarily, and the question in my mind now is whether you want to do it at this moment or a little later in the morning.

[fol. 2420] Mr. McConnaughey: I think we would prefer that you finish all that you have to offer, and then we will take it up.

Mr. Burr: Mr. Williams then may take the stand.

[fol. 2421] And also George B. Williams, recalled on behalf of The Ohio Bell Telephone Company, having been heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. To what extent, Mr. Williams, have you had experience in the matter of evaluating the cost of establishing

the business of a company such as The Ohio Bell Telephone Company as a part of the going concern value of the company's property?

A. I have studied the subject of going concern value and cost of establishing the business for the last twelve or fourteen years.

I have made various studies and have collaborated with Mr. Schneider in making various studies of cost of establishing the business for a large number of the exchange properties of The Ohio Bell Telephone Company.

I also have made studies and collaborated with Mr. Schneider in making studies on exchanges of the Central Union Telephone Company.

In addition I gave considerable study to this subject during the time that I was connected with the Public Utilities Commission of Ohio.

Q. What if any study have you made of the subject with respect to the property of the Ohio Bell Telephone Company as of June 30th, 1925?

A. I have not made a separate study of my own, but I have given considerable thought and study to the value or cost prepared by Mr. Schneider in connection with the prop-
[fol. 2422] erty of The Ohio Bell Telephone Company as of June 30th, 1925.

In the first place, from my experience in the valuation of telephone properties and the studies that I have made in the past, I am convinced that there is in the property of The Ohio Bell Telephone Company an element of value above the bare bones of the property which may be termed cost of establishing the business or going concern value.

The study prepared by Mr. Schneider, in my estimation, represents a conservative value for the cost of establishing the business, and in my judgment there is an element of value beyond that set up in Mr. Schneider's study, which is a part of the value of The Ohio Bell Telephone Company and which is a further part of the going value or going concern value which inheres in that property.

Q. To what extent have you examined Exhibit Number 3 introduced in connection with Mr. Schneider's testimony?

A. I have examined it in considerable detail, going through various subdivisions as set up by Mr. Schneider. I have made some check of the amounts set up and the manner in which they were prepared. I have given quite

a bit of thought to the program as outlined by Mr. Schneider in the preparation of this study. And it is my conclusion that the items which Mr. Schneider has included and the amounts included for the various items are proper amounts for those various items.

Q. In your judgment are the cost of establishing the business and going concern value synonymous?

A. They are not. I feel that there are certain elements [fol. 2423] which it is proper to include in the item of going concern value such as preliminary expenses of various kinds, that is the preliminary cost of financing, the preliminary cost of organization and preliminary surveys and engineering which are not included in Mr. Schneider's study, and also that elements of going concern value which may be designated as risk of producing or reproducing the property and the business as against the opportunity to purchase a completed and going plant or a concern. None of these items that I have mentioned have been included in Mr. Schneider's study, and in my judgment are factors in the element of going concern value in addition to and above that which we designate as the cost of establishing the business.

Q. Have you prepared an exhibit showing the reproduction cost new in present condition of the property of The Ohio Bell Telephone Company as of June 30th, 1925?

A. I have.

Mr. Burr: It may be marked for identification as Williams Exhibit Number 11 and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 11.

Q. Calling your attention to the first line of figures at the right hand edge of the sheet, tell the Commission, if [fol. 2424] you please, the source of the amount shown as $127,876,392.

A. That is the total reproduction cost new of the physical property as taken from Williams Exhibit Number 9, being the sum of the figure of $126,327,392, which latter figure is the total including the interest during construction on Williams Exhibit Number 9, and also those items on Williams

Exhibit Number 9 of office furniture and fixtures, amounting to $576,083, tools, implements and store equipment amounting to $401,919 and stable and garage equipment amounting to $570,998. In other words it is the sum of those items which we consider depreciable property or to which the average per cent condition of the property should be applied.

Q. Where did you get the 90 per cent shown in the second line of figures?

A. The 90 per cent represents my judgment as to the average or composite per cent condition of the physical property and is based partly upon Mr. Stephens' Exhibit, which shows slightly over 90 per cent, and my own exhibit of per cent condition showing also slightly over 90 per cent.

Taking into consideration these two exhibits and my general knowledge of the property, I have taken the round figure of 90 per cent as representing the per cent condition of the physical property.

Q. The third line, the figure is found by applying 90 per cent to the first figure shown on the page?

A. That is right; taking 90 per cent of the $127,876,392 gives the appraised value of the present condition of the physical property as $115,088,753.

[fol. 2425] Q. Now the net additions as I understand it are shown in your exhibit number 8?

A. That is right.

Q. Those net additions refer to what items?

A. They refer to the net additions to the general equipment account between October 31, 1924, and June 30, 1925.

I have not depreciated those net additions for the reason that they were so recently installed, that is prior to June 30, 1925, that I have considered them as being in 100 per cent condition.

Q. Where did you get the amount shown for working capital including supplies as $6,350,000?

A. I have taken that item from Williams Exhibit number 9, being the same amount as that shown on line 10.

I have not depreciated the item of working capital including supplies for the reason that supplies are new material and the balance of the working capital is cash, and of course not depreciable.

Q. The "miscellaneous construction expenditures" is the same one heretofore discussed, is it not?

A. That is right.

Q. And what have you to say with respect to the construction work in progress item?

A. That item is taken from Williams Exhibit number 9, being the same amount as that shown on line 12 of the latter exhibit. I have included the item in Williams exhibit number 11 at 100 per cent condition for the reason that the construction work in progress is of course new property as of a given date.

[fol. 2426] Q. Now the total up to that point is how much?

A. The total including the various items already discussed is $123,843,083.

Q. And that represents what?

A. That represents my best judgment of the cost to reproduce new in present condition all the property of The Ohio Bell Telephone Company as of June 30th, 1925, exclusive of the cost of establishing the business or any going concern value.

Q. And the item or amount shown for the cost of establishing the business in the next line you have secured where?

A. I have taken that from Schneider's exhibit number 3, which has been previously discussed by both Mr. Schneider and myself.

Q. What does the amount of $144,611,241 represent?

A. That represents my best judgment of a conservative or minimum value of the cost to reproduce new in present condition of the property of The Ohio Bell Telephone Company as of June 30th, 1925, including the cost of establishing the business but not including the entire amount, which should probably be included for going concern value.

Cross-examination.

By Mr. McConnaughey:

Q. Mr. Williams, at page 416 of the record, in introducing your exhibit 5-a, b, and c, which is an inventory as of June 30th, 1925, you have indicated that that is a revision bringing up to date the inventory previously introduced in [fol. 2427] this case. You have explained the purpose of that change in the exhibit to be to bring the inventory nearer to the present date, and to make it easier to check what you have introduced here. Will you explain how it

will be possible, from anything on this record, to check such items, for instance, as the outside plant of the company as to its correctness from the exhibits which you have introduced?

A. The answer to that question, Mr. McConnaughey, would hinge to some extent, on the extent to which you think it desirable to check the property. Now we have available map records indicating the location of the outside plant in the various exchange areas. Those map records are available at any time you may desire. Now from those map records you can check the location of the property and the amount of property in any exchange area.

Q. But you have not indicated on this record the outside plant in any exchange area; you have shown it as a total amount of certain classes of property of that kind?

A. For the state as a whole, that is right.

Q. For the state as a whole?

A. Yes, sir.

Q. And as far as this record is concerned it would not be possible to check those quantities except by taking the entire outside plant, counting and locating and enumerating all the items, would it, throughout the state?

A. Unless you had some subdivisions of the property it would be a very difficult matter.

Q. You have not produced those subdivisions in this record?

A. No; the subdivisions represent a very considerable [fol. 2428] detail and a large volume of statistics.

Q. You have made up this inventory that is used as a basis of that appraisal in this case, as I understand, by taking a considerable number of exhibits or inventories rather, previously made for use in various rate cases and for other purposes, and combined them, so as to cover everything that was inventoried previously and added to that the additions and taken from it the deductions on the part of the plant included in these various inventories for each of the exchange areas and thus bringing the entire property down to date?

A. In effect that is what happened. What really happened was that when we made an inventory of our property in any particular exchange our plant records were corrected at that time, so that they reflected the property actually in place as of the inventory date. In this manner we have

corrected our records so that they agree with the field inventories and agree with the inventories that were submitted in each of the various cases.

Our regular routine provides for the addition and deduction of the property actually added and displaced from the time of the inventory date, or from a given date down to June 20th, 1925.

Q. Now will you produce here a list of the inventories that you used as the basis of this inventory, giving the date, the property that was covered by each particular inventory and the purpose for which it was made, and whether or not it was used or filed in any proceeding before the Commission, and if so in what proceeding?

[fol. 2429] A. Yes, sir; we can furnish that information.

Q. My notion is that it could be furnished in the form of a schedule or an exhibit that would disclose that information.

(No reply).

Mr. Burr: How long will it take to get up such an exhibit, Mr. Williams, so that Mr. McConnaughey can have some idea as to when it will be available?

The Witness: Well it will take several days, because I assume that Mr. McConnaughey would like to have the dates in the inventories, whether they were actually used in proceedings before the Commission or not.

Q. Whatever has been used as the basis for the present inventory, whether it was used or not, and if it was used, we would like to have that fact shown, and the proceeding in which it was used.

The Witness: I should say it would probably take a week to prepare that statement.

Q. In preparing the 1925 inventory you have indicated at page 417 that this 1925 inventory contains more details with reference to the property than the 1924 inventory. Can you point out in what respect it shows more details?

A. Yes; the central office telephone equipment and the private branch exchange equipment is shown in considerably more detail in the 1925 inventory than in the 1924 inventory.

Q. Can you take a copy of that and point out just what you mean by that answer?

A. Yes, sir; in the 1924 inventory the central office tele-

phone equipment was shown, if I remember correctly, only [fol. 2430] as to the number of sections and the type of sections for each office.

In the 1925 inventory, I have set up a considerable amount of detail, as I discussed in my direct examination, showing in the central office telephone equipment for each office, the number of positions, the number of lines, the type of board and a large amount of detail in connection with such items as turning sections, end panels, the number of answering jacks, the number of multiple jacks, the number of outgoing trunks, the rural positions, the cord circuits, supervisory equipment and a considerable amount of detail of a like nature.

Q. And how about the private branch exchanges, have they been amplified in the same way?

A. Yes, they have.

Q. But applying to substantially the same private branch exchange property?

A. That is right.

Q. That is you have taken a private branch exchange, locating it and adding these details as to just what was included in the equipment used there?

A. That is right. Of course both for the central office telephone equipment and private branch exchange equipment there was also the change between June 30th, 1924 and June 30th, 1925, but that is taking into consideration the plant actually added or deducted.

Q. Well that is true of all the different classes of plant throughout?

A. That is right, except that the only change is that there has been more detail shown in the 1925 inventory.

[fol. 2431] Q. Well in no other particular except what you have named; is there more detail in any other particular except what you have named?

A. I do not recall any other accounts or any other detail except that for the central office telephone equipment and the private branch exchanges.

Q. In making the real estate appraisal, who in your organization had charge of communicating with the committees of real estate boards which made these appraisals?

A. Mr. Manley working under my direction and supervision directly communicated with the different appraisal committees of the real estate boards.

Q. Were they seen in person or written to?

A. They were seen in person.

Q. And are you familiar with the instructions that were given them?

A. I am.

Q. What were the instructions?

A. They were simply instructed to find the fair value of each parcel of property as of the various dates as of which the properties were valued. They were not given any information relative to the purpose of the valuation except that the valuation was not for tax purposes.

Q. Do you know whether or not any of them in making their valuation took into consideration the present use of the property, that is the fact that it was now being used for telephone purposes?

A. There were no instructions given to that effect, Mr. McConnaughey. Now whether they did or not, I am not sure.

Q. So far as your instructions went the intention was [fol. 2432] that they should appraise it simply as a piece of real estate?

A. Yes, sir, the same as they would appraise any other piece of property, yes, sir.

Q. They were given instructions, however, not to consider it for taxation purposes?

A. That is right.

Q. Recognizing the fact that a different basis is sometimes considered proper with reference to taxation?

A. Yes, sir.

Q. Or why was that restriction put on them?

A. Because I think it is an open secret that tax valuations are always lower than fair values, even though the law says that the value for taxation purposes shall be a true value in money as of a given date.

Q. You had that in mind and guarded the company against any such consideration as that, I presume?

A. Precisely, because I did not feel that the tax value was a fair basis for a value for this purpose.

Q. Now you used the cost price to the company in arriving at a value of five parcels of real estate as I recall; some property in Canton, Cleveland, Columbus and Toledo, all of which you stated had been recently purchased, and

therefore you considered it proper to use that value as a fair indication of the fair value.

A. That is right.

Q. At this time?

A. Yes, sir.

Q. Parcel Number Three, at Canton, Number 405 Cleveland Avenue, you say was bought for $128,569. Do you know what the condition of that property was at the time of its purchase as to whether or not it was improved property?

[fol. 2433] A. I could not tell you, Mr. McConnaughey.

Q. Do you know whether or not there were any buildings of any kind on it that were purchased along with the real estate?

A. Not from memory, I could not tell you.

Q. Is there a record from which you could give us that information as to that?

A. Yes, sir.

Q. Is this price of $128,569 the total price that was paid for the property including any improvements if there were any?

A. That was the price, or that was the cost that appeared on our records as of June 30th, 1925. Now that might or might not have included, if there were any improvements on it, those improvements, for the reason that the interstate accounting provides that in case there are improvements on a piece of land that are dismantled or displaced, that the value of those improvements finds its way into the land account ultimately. Now whether this cost of $128,569 included any costs that might have originally been on there for improvements or not, I could not tell you without looking up the record.

Q. Is that parcel number three now being used for telephone purposes in Canton?

A. I think I have some information on that.

Q. I think your detail shows something about that.

Mr. Tolles: There is a new building on it now, Mr. McConnaughey.

Mr. McConnaughey: That is what we want to get at.

The Witness: Yes, that parcel has a new building on it that was in use as of June 30th, 1925.

[fol. 2434] Q. Now parcel 19, in Cleveland, located at 720-730 Huron Road, what is the fact with reference to improve-

ments on that property at the time it was purchased? That I noticed was purchased on February 28th, 1923.

A. Yes; that parcel is part of the ground underlying our new office building now being constructed.

Q. That is not now in use for telephone purposes; it is in process of construction as I understand?

A. Well that depends on the definition of what is now in use. From the standpoint of inclusion in a case of this kind I believe that it should be included.

Q. What is the fact as to whether any telephone operations are being conducted in the building at this time?

A. There are none.

Q. It is a building in process of construction?

A. That is right.

Q. How far along is it?

A. I could not tell you that, offhand.

Q. When will it be in use according to the schedule that has been worked to?

A. My last information on that is that the building is expected to be completed shortly after the first of next year.

Q. The first of 1927.

A. Yes, sir.

Q. Is that building included in the $2,223,718 of construction work in progress?

A. The expenditures that have been made I should say were in there.

Q. Including the purchase of the real estate?

A. Oh, no; there is none of the real estate in there.

[fol. 2435] Q. Nothing but the building costs?

A. That part of the expenditure that has been made for the building, yes, sir, and that has been cleared to the construction work in progress account.

Q. You have not yet answered the question that I asked you as to whether or not there were any improvements upon this site at the time it was purchased for $309,664.00; what is your answer to that?

A. It is my recollection that there were some improvements on the land.

Q. Did any part of the price of $309,664 include those improvements?

A. I could not tell you that from memory, Mr. McConnaughey.

Q. Will you find that out and give it to us later?

A. Yes, sir.

Q. Is this figure or price of $309,664.00 the amount that was paid to the former owner of the property for the title at the time of the purchase by the company?

A. That represents the back cost of the parcel as of June 30th, 1925. Now whether it is precisely the price that was paid or not I could not tell you.

Q. Will you get that from the record and give it to us later?

A. Do you want the price that was paid?

Q. The price that was paid and whatever other amounts go to make up the $309,664.

A. I think that the first part of that question is included in the information you have already asked for, as to the original cost of each parcel of land. The second part, I have a note of that here.

[fol. 2436] Mr. Tolles: you were having Mr. Upritchard get that information.

Mr. McConnaughey: Yes, I think that has been asked for before.

Mr. Burr: Mr. Commissioner Poor asked for it, and we are now preparing the information because the first exhibit on the subject was not quite responsive to his request.

By Mr. McConnaughey:

Q. Now parcel number 21 in Cleveland, was that improved property at the time of its purchase? That is located on West Thirty-fifth Street, opposite Searsdale Avenue.

A. I am unable to give you that information from memory, Mr. McConnaughey.

Q. You will get that also, will you?

A. Yes.

Q. Now that also is indicated as "To be used for Central Office Building"; is there any construction work in progress on that?

Mr. Charles P. Cooper: Yes, the building is completed on that site.

The Witness: My understanding and my last information is to the effect that the building is either completed or almost.

By Mr. McConnaughey:

Q. Are any telephone operations being conducted in it at the present time?

A. I am unable to tell you that.

Q. Will you learn that fact and advise us?

A. Yes.

Mr. McConnaughey: Perhaps Mr. Cooper can tell us; he volunteered something about the construction of it.

Mr. Cooper: The equipment is being installed now, Mr. [fol. 2437] McConnaughey, but it is not yet cut into service.

Mr. McConnaughey: When will it be?

Mr. Cooper: I think it is scheduled for May; I am not certain about that.

By Mr. McConnaughey:

Q. Parcel number 18, in Columbus, Corner of Oakland Park Avenue and Indianola Avenue, was purchased for $20,300; were there any improvements on that property?

A. My understanding is there were not.

Q. That was vacant, was it?

A. That is my recollection and my information, yes, sir.

Q. And that is not yet in use, is it?

A. My information is to the effect that there is to be a building started on that very shortly. I do not think it has been started yet; probably within the next month or two.

Q. That is to be used for central office purposes?

A. Yes, sir.

Q. Parcel number 8, in Toledo, purchased November 8, 1923; that is located at 127 Huron Street, Toledo, and the purchase price is $159,260.00; is that now used for telephone purposes?

A. There is a building in process of erection on that piece of property which it is expected will be completed about the middle of this year.

Q. Now you have stated that you understand all this property was purchased in the open market and you have defined "open market" to be a sale as between two individuals in which other parties than the individuals who actually conclude the sale might have participated; just exactly what do you mean by that answer?

[fol. 2438] A. Why, anybody could have bought it that wanted it.

Q. Not an auction sale?

A. Oh, no.

Q. But a property that was for sale, offered by a willing seller to a willing buyer?

A. That is correct, yes, sir.

Q. You have no personal information as to how these properties were purchased?

A. No, not as to the details; I have not.

Q. What you have stated with reference to how they were purchased is a matter of hearsay, isn't it; hearsay or assumption?

A. A matter of general knowledge as to how our parcels are generally purchased; I know that that is the fact.

Q. You have no personal information as to these various properties, however, in detail?

A. No detail as to any particular one, no, sir; I have not.

Q. You have stated that subsequent to February or March, 1925, you checked about 85 per cent of the exchange property in this inventory?

A. Yes, sir.

Q. What 85 per cent was checked; how did you determine what to check and what to leave out?

A. We took the larger exchanges in the order of their size, Mr. McConnaughey. That represents the property in the largest exchanges and then going on down to some of the very small ones also.

Q. And why did you stop at eighty-five per cent?

A. Because that is all we had time to do at that time.

Q. You went as far as you had time for?

A. Yes.

Q. Just how did you conduct that check?

A. We obtained copies of the record maps indicating the amount and location of the various kinds of property as of a given date. We summarized those amounts of [fol. 2439] property from the record maps and compared them with the plant measurement record which is the basis of this inventory as of the same date. Any discrepancies were checked in the field under my supervision and the proper corrections made either in the plant measurements or in the maps, depending upon which one required the adjustment.

Q. Did you make field checks on all the property?

A. No; it was not necessary.

Q. You checked the maps against the inventory?

A. That is right.

Q. And where you found any discrepancy you went out into the field?

A. Yes, sir.

Q. Otherwise there was not any field check during this period?

A. No, sir; we did not consider it necessary.

Q. How much of the property was subjected to a field check during that checking process?

A. That would be almost impossible to state, Mr. McConnaughey, because at some of the exchanges we might check one account and in other exchanges we might check two. And one of those exchanges that we might check a certain kind of property might be a large one and the other one a small one. It would be almost impossible for me to tell how much was checked.

Q. Was there a considerable amount of it checked in the field or a relatively small amount?

A. No; there was not a large amount of it checked in the field; we did not find it necessary.

Q. Did you make any changes in the inventory as the [fol. 2440] result of that check?

A. We did.

Q. How?

A. We did. I might state that that sort of a check is a routine proposition in my department; that is, we are constantly checking our measurement records and our map records from time to time, and making adjustments. I have a field force in the field all the time doing just that sort of thing. That is to keep our records up to date, and corrected as near as we can all the time, both for the matter of plant measurement record and the matter of the map record. We simply concentrated on it a little more during the last year and took advantage of the time that was available.

Q. The result of these inventories you have stated becomes your plant record; you mean by that, that that is the plant record on your books of account?

A. Yes; it corresponds with the inventory that I have submitted here, with the exception that I have drawn out

of the plant measurement record the construction work in progress, and the inventory is a complete record less the construction work in progress, because the construction work in progress is submitted as a money value item at the bottom of the summary.

Q. Well then, on your general books of account, account number 212, for instance, the total of it would appear as of June 30th the same amount that you have shown in this inventory?

A. Do you mean money?

Q. Yes.

A. No, sir; no, sir. Plant measurement, where plant measurements are kept——

Q. The plant record will be the cost price as it appears [fol. 2441] on the books?

A. The money value record will be the original cost record as that appears on the books, and of course that money value will not agree with what I have set up in the appraisal. On the other hand, the plant measurement record will agree with what we have set up in the inventory and in the appraisal; that is the items of property; the quantities of property will agree.

Q. In making this check from February and March to the present time, or the time you put in this inventory, when you undertook to check a particular exchange, you checked all the property in that exchange, did you?

A. Wherever we found it was necessary to do that. As I say, we did not make that sort of a check on this class of plant where the map record and the measurement record were in agreement.

Q. Well you did check the map record against the measurement record in all cases?

A. Oh yes, thoroughly in every exchange.

Q. You went clear through all the property, the central office equipment and outside plant, and everything else?

A. Oh, yes.

Q. On page 482 of the record—if you have a copy of it there——

A. No, I have not.

Q. Well I will show you my copy. You were asked this question:

"What new inventory, made since the 1924 inventory of

any particular exchange property is now included in the 1925 inventory."

Your answer is:

[fol. 2442] "As I testified, in February and March of 1925, we were at that time engaged in making a new inventory of the related property."

Q. Is that correct?

A. No; that is not. I said: "Cleveland property."

Q. This inventory now includes, as I understand it, an up-to-date inventory of the Cleveland property.

A. That is correct; yes, sir.

Q. And in that respect it is different from the 1924 inventory?

A. Yes, sir; the Cleveland property represents more than one third of our exchange property in the entire state.

Q. Account number 111, which includes real estate, buildings which are not used nor intended to be used for telephone purposes, are included in this final figure that you have given here, are they?

A. They are not. Those figures for account 111 were summarized on a separate summary which is Williams Exhibit Number 10, but they were not carried forward into the costs on Williams Exhibit number 9 nor Williams Exhibit number 11.

Q. Well what is the purpose of including them in the inventory at all?

A. Simply to set up all of the property that the Ohio Bell Telephone Company had in the State of Ohio.

Q. With reference to parcel 7 in Columbus, located at 99-107 North Third Street, which is held under lease, can you give us the terms of that lease?

A. The only terms that I can give you of the lease is what I know as a matter of general knowledge and which is to [fol. 2443] the effect that we have the right or option to purchase under the lease, I believe as of about the first of next month, for a final payment of I think $75,000. And by the payment of that amount we obtain the fee simple title to this particular piece of real estate.

Now as I explained in my direct testimony, the real estate committee's valuation on that piece of property was $198,000, and I included in my valuation here as our part of the cost to reproduce new, the $198,000 less the $75,000 payment which we have to make before we obtain a clear title to the property.

Q. Do you know what the rental is on that property?

A. No, I do not, Mr. McConnaughey.

Q. Can you produce a copy of that lease for the record?

Mr. Burr: Yes. Let the record show that under the lease in question the lessee, which is the Ohio Bell Telephone Company, has the option to purchase the property upon payment to the owner of the sum of $75,000, the option to be exercised by March 31st, 1926.

Notice of its intention to exercise the option has been given by the telephone company to the owner of the premises and the owner has accepted the notice as being in accordance with the terms of the lease.

The papers covering the transfer of the property to the telephone company, including the deed from the owner to it, are in process of pr-paration, and it is the plan to close the deal in accordance with the option.

By Mr. McConnaughey:

Q. In this inventory how have you distinguished between [fol. 2444] toll and exchange property?

A. The central office telephone equipment is set up as between toll and central office, the division being the use of the property; that is switchboards entire or sections entire, and on the outside plant we have used the same division that has been customary both with the Ohio Bell Telephone Company and with the Commission, of considering all poles within the base rate area carrying any exchange property as exchange poles.

Q. When you say "base rate area" you mean exchange?

A. Exchange area in which the base rate applies. And all poles outside of the base rate area carrying any toll lines, as toll line property.

Q. And if any property within an exchange was jointly used for toll and exchange wires, it would not appear as toll property?

A. No; it would appear as exchange property. And similarly, any property outside of the base rate area carrying both toll and exchange would appear as toll property.

Q. Where is there any property outside of an exchange rate area that carries exchange property?

A. We have quite a number of lines that have both toll and exchange lines on them; that is they have our through toll lines between exchanges and they may also and do frequently carry rural exchange circuits.

Q. Well, how do they compare in amount?

A. Do you mean as between——

[fol. 2445] Q. Between the toll and exchange, in territory outside of exchange areas.

A. Why the property that carries both toll and exchange, the preponderance is the greater to the toll; also inside of the rate base area property carrying both toll and exchange, the preponderance is greatly in favor of the exchange.

But taking the two into consideration on the bases of studies made both while I was with the Public Utilities Commission and studies that we have since made, we find that the two are very nearly off-set.

Q. You have no data that covers the field completely showing the division of toll and exchange property within the exchange areas or outside?

A. No; that is a very complicated study, Mr. McConnaughey, for the reason that the basis, or the number of exchange or toll wires change almost from pole to pole, in many cases, and they change frequently from day to day. So that unless you do use some more or less arbitrary division which has been determined in your judgment and reasoning from studies which have been made in some places, you have got a study to make if you want to make it in full detail, that is very complicated and will take a very large amount of time and money.

Q. How recently has any study of that situation been made by the company?

A. We made a study I think about two years ago was the last one.

Q. And where was that made?

A. I do not recollect, Mr. McConnaughey.

Q. Was it made under your supervision?

A. It was.

[fol. 2446] Q. Have you a record of it?

A. I could not tell you whether that is still in the records or not; it might or might not be.

Q. It did not result in any change in the practice?

A. Oh, no, no.

Q. Is there any reasl estate or buildings that are jointly used for toll and exchange purposes?

A. Oh, yes.

Q. Practically all of the exchange properties are used to some extent for toll purposes, are they not?

A. Yes, sir.

Q. Is there any division of the real estate or building valuations as between toll and exchange in your inventory?

A. There is not.

Q. How are the buildings and real estate assigned, as to whether it is included in the exchange or toll property?

A. They are not assigned separately, Mr. McConnaughey.

Q. Well in fixing a rate for toll property how would you get at the valuation or the rate base that was to be considered as the base for the toll rates?

A. I have not considered that it would be necessary to find a separate value for toll purposes.

Q. How was that handled in the toll rate case, in the valuation in that case?

A. I do not recollect, Mr. McConnaughey. I did not set up the value in the toll case.

Mr. Charles P. Cooper: I can answer that question.

Mr. McConnaughey: All right; go ahead.

Mr. Cooper: The buildings and lines were appraised and the toll expenses were charged with an amount equal to the [fol. 2447] carrying charges including a return on the proportionate part of the land and buildings used for toll purposes.

Mr. McConnaughey: What proportionate part was used; how was the proportion arrived at?

Mr. Cooper: It was arrived at by a study of the conditions in each property.

Mr. McConnaughey: Well we can get at that detail from the record in that case?

Mr. Cooper: Yes; that is in the toll case.

By Mr. McConnaughey:

Q. At page 535 of the record the question of Western Electric Engineering was being discussed and you were asked to show a typical case in a typical way as to how orders were given and how the engineering service of the Western Electric Company was furnished and charged for in filling orders by The Ohio Bell Telephone Company for central office equipment, in which there was an item of Western Electric Engineering. Are you prepared to give that information?

A. I am not, Mr. McConnaughey. If that appears in the record it has slipped my mind. I think Mr. Schneider gave a discussion of the way Western Electric orders are filled

and the payments are made, and there has been quite a bit of testimony relative to what that so-called Western Electric Engineering, which is more properly factory design and drawings and details, covers.

Now if that request is in the record I have not a note of it.

Q. Well in order that you may have the exact request in your mind, so that you can furnish it hereafter, I call your [fol. 2448] attention to what appeared on page 534, instead of 535, commencing at the bottom of page 534. There are several pages in there in which you and the Commissioners, particularly Commissioner Marshall, and myself, passed some questions and answers back and forth about that detail, and at the bottom of the page, Mr. McConnaughey says:

"Don't the Commission think it would be a good thing to cover this point"—that is just how the Western Electric Engineering got into these bills,—"by asking him to show a typical case in a typical way, with plans and specifications of just what they furnished"—that is the company,—"and just exactly what the Western Electric, or anybody else does, in response to such a request."

And Mr. Chairman Marshall said: "Do that now or later, if he will."

The Witness: I will have to get that up, Mr. McConnaughey. It slipped my mind.

Q. At page 535 also you were discussing the matter of freight and cartage and you used this language:

"The freight and cartage is the freight and cartage from the point of manufacture to the point of destination on each particular bill, on the original cost basis. Of course, specific freight and cartage is shown for each particular job."

What did you mean by "original cost basis" there; how do you apply original costs in your unit prices?

A. We go only to the original cost during the period just prior to the date of the valuation in order to get original cost [fol. 2449] as of a recent date, on the theory that the recent cost to produce is one of the best measures of the cost to reproduce a particular type or kind of property.

Now in regard to the item of freight and cartage, we have handled that just exactly as we have handled the item of labor, for instance: we go to the actual costs covering a period just prior to that as of which the valuation was made, and find out not only what it is costing us in the way of labor

to produce similar property, but also what the freight and cartage is for similar property.

Q. Well, then, the use of the words "original cost" applies to the $1,750,000 of representative work that you took to determine the ratio of labor and other costs to the material costs?

A. That is correct.

Q. I thought that was what you meant, but it did not seem quite clear in the record.

A. That is correct.

Q. Now, in that connection, you indicated that you had taken actual work during a period of a couple of years prior to June 30th, 1925, and sometime subsequent thereto, to a gross amount of $1,750,000. Will you state what particular amounts were included in that $1,750,000; where the work was done, and what was the nature of it and the amount involved in each job, and the relation of cost to material as those jobs showed in detail?

A. We considered about $1,700,000 worth of actual construction costs for central office telephone equipment to arrive at our costs for installation, labor, installation material, Western Electric Design and Factory details, freight [fol. 2450] and cartage, and contingencies. Of that amount we selected about $1,200,000 as being typical of normal construction costs.

Now that $1200,000 roughly was made up of jobs at the Akron main office, Toledo Forest, Toledo Navarre, Cleveland Lakewood, Cleveland Fairmount, Cleveland Main, Cleveland Hemlock, Cleveland Lincoln, Cleveland Broadway, Cleveland Glenville, Columbus Garfield, Willoughby, Alliance and Washington Court House. Those are all of the jobs.

And thereupon a recess was taken until 1:30 o'clock P. M. of same day.

[fol. 2451] Afternoon Session

Wednesday, February 10th, 1926.

And also GEORGE B. WILLIAMS, resuming the stand for further cross examination, having been heretofore duly sworn, continued his testimony as follows:

Cross examined.

By Mr. McConnaughey:

Q. Mr. Williams, you have named the jobs that were included in the $1,200,000.00 worth of work; will you give the nature of the job and the amount that was involved in it in each case; you have already stated where it was located.

A. These were either entire new central office installations or entire new units of central office installation; and the amounts as taken from the records of the company covering each one of those are as follows:—

Q. Indicate which were new central offices and which were new units in central offices.

A. I haven't that information here, Mr. McConnaughey.

Q. All right.

A. Akron, Main $176,053.00; Toledo, Forrest $54,523.00; Toledo, Navarre $37,761.00; Cleveland, Lakewood $88,162.00; Cleveland, Fairmount $85,848.00. Also a later [fol. 2452] installation at the same place of $26,780.00. Cleveland, Main $100,986.00; Cleveland, Hemlock $56,080.00; Cleveland, Lincoln $46,887.00; Cleveland, Broadway $41,105.00; Cleveland, Glenville, $149,432.00; Columbus, Garfield $78,205.00; Willoughby $13,887.00; Alliance, Manual $49,729.00; Washington Court House, Manual $32,711.00; Alliance, Automatic $90,093.00; Washington Court House, Automatic $54,859.00.

Mr. McConnaughey: I think that is all the cross examination we have at this time of Mr. Williams.

Mr. Burr: You may stand aside, Mr. Williams, and Mr. Schneider may resume the stand.

[fol. 2453] And also WALTER G. SCHNEIDER, recalled on behalf of The Ohio Bell Telephone Company, being heretofore duly sworn, testified as follows:

Examined by Mr. Burr:

Q. Mr. Schneider, have you made a study of the annual rate of depreciation for each class of plant and equipment representing the property of The Ohio Bell Telephone Company in this case?

A. I have.

Q. Is the first part of your study represented by the paper which may be marked for identification as Schneider Exhibit No. 4?

A. It is.

Mr. Burr: We offer Schneider Exhibit No. 4 in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 4.

Q. Mr. Schneider, will you please take up the various classes of plant shown in the exhibit and explain to the Commission how you arrived at the life in years, the net salvage and the net loss, and the annual rates shown for each of those classes of plant?

[fol. 2454] A. In order that the telephone company might measure by periodic intervals of time the amount of depreciation of its property, it is necessary that annual rates be established for that purpose.

Since 1913 I have studied the question of depreciation for various companies and followed through to the present time, noting any changes which have been made from time to time as to accounting, and as to the varying methods of construction, changes in specifications and factors of growth, which are all elements of the question of depreciation.

The depreciation of plant and equipment probably is the largest single item of expense incurred by a telephone company.

The amount of property consumed annually is an expense which must be considered in connection with the making of rates and charges for service.

In my Exhibit No. 4 I have indicated what in my judgment is the proper annual rate for a determination of the depreciation of plant and equipment, and for the determination of the amount of landed capital to be amortized.

The annual rate may be expressed as the rate at which property is being consumed in rendering service.

The question of depreciation of plant and equipment and amortization of landed capital is dependent on the wear, tear, rust, rot and decay of its physical property. The amount of the rate is dependent upon municipal require-

ments, on storms, both sleet and wind, fires, hazards of various characters and kinds, contingencies of various [fol. 2455] kinds, and on the important factor of growth.

The classes of plant as indicated on this exhibit represent the various items of physical property which The Ohio Bell Telephone Company owns and maintains and operates.

The life in years under Column A represents my best judgment as to the life of the various classes of property in one location. It does not represent the life of what some people are wont to say "from the cradle to the grave". The per cent. net salvage listed in column B represents my best judgment as to the amount of net salvage which would be obtainable for the various classes of property at the time these various classes of property were retired from service in their first location.

Q. Were or are retired?

A. Are retired. The per cent. net loss indicated in column C represents one hundred per cent. less the per cent. net salvage indicated in Column B. The annual rate indicated in column D represents the mathematical calculation and is column C divided by column A.

Q. Now on what experience or judgment is the life in years column founded?

A. That is based on a review of the experience both of The Ohio Bell Telephone Company and its predecessor, the Bell Companies.

Q. Have you compared the life in years table shown in your Exhibit No. 4 with the actual experience of The Ohio Bell Telephone Company, and if so has that experience been reduced to exhibit form?

A. Yes, sir.

Q. Calling your attention to the first of those exhibits, [fol. 2456] which is a blue print, and which may be marked for identification as Schneider Exhibit No. 5——

Mr. McConnaughey: Mr. Burr, would you object to his stating what the significance of those figures in the right hand margin in parentheses is at this time on Exhibit No. 4?

Mr. Burr: Not at all.

By Mr. Burr:

Q. Will you answer Mr. McConnaughey's question, Mr. Schneider, please?

A. The figures, for example for station installations, which is line six, under column D we have fourteen in parentheses. That indicates the annual rate for station installations if they were to be treated in their entirety. But a large majority of station installations are treated through the station removals and changes account, and that figure of fourteen has been modified to the figure of 2.8 per cent., being 20 per cent. of 14. In other words, station installations, 80 per cent. will be handled through station removals and changes, and 20 per cent. through the fixed capital accounts.

The same is true of interior block wires and drop wires.

Q. Now with respect to the blue prints referred to in one of your previous answers, which reflect the actual experience of The Ohio Bell Telephone Company and its predecessor companies, I first call your attention to the one marked for identification as Schneider Exhibit No. 5 and ask you whether or not that is one of the blue prints to which you referred?

A. It is.

[fol. 2457] Mr. Burr: We offer in evidence Schneider Exhibit No. 5.

And thereupon the blue print last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 5.

Q. Will you please take up the discussion of the blue print and tell the Commission its application?

A. In order to check the judgment figures which are set forth on my exhibit No. 4 I have made a study of such classes of property which the company keeps statistical records of, which are of such length of service life as to furnish adequate information in order that an accurate check might be made.

Referring to my Exhibit No. 4, we have no records of sufficient amount to furnish anything reliable relative to buildings. The buildings that we have in service, and the age or duration of those buildings in service, are not indicative of their service life. We have records of fourteen buildings which have been retired.

Q. Since what date?

A. Since 1894. That record indicates an average service life of 11.3 years.

Q. For what?

A. For the buildings which have been retired. That life, in my judgment, is too low. Buildings at the present time are being designed for a period of twenty to twenty-five [fol. 2458] years, and I think that that probably reflects more nearly the correct life in years for buildings which we have at the present time, and for which we are setting aside a reserve for accrued depreciation.

Q. Do you mean by your answer that the buildings are only designed to last for twenty-five years?

A. That is as far as the telephone company can forecast its activities, and it is for that period of time only that they figure on buildings.

Q. Do you mean that the buildings are only designed to stand for twenty-five years?

A. Oh, no; I am talking about the life as a telephone unit.

Q. Proceed.

A. Central office equipment, which is indicated on line four of my exhibit as having a life in years of ten, has been studied and the results of that study are indicated on my Exhibit No. 5.

My Exhibit No. 5 is the application of the turnover cycle method, using the gross additions and plant in service as indicated from the company's records.

It is not possible to go back prior to the year 1913. 1913 was the year in which the uniform system of accounting was prescribed by the Interstate Commerce Commission and put into effect by telephone companies. Prior to that time the telephone companies had a system of accounting which for their purposes, at that time, was adequate, but was not any where near as elaborate as it is today. And prior to 1913 we find that the classes of property were in many cases combined so that the classes as outlined in my [fol. 2459] Exhibit No. 4 are not available.

Now the turn-over cycle method is probably the most accurate method available at the present time for the determination of service lives as considered in connection with telephone property. The basis of this study is the accumulation of gross additions in a reverse chronological order until such accumulated gross additions shall equal the plant that is in service at any particular date.

Q. By the way, why did you start with 1923 to accumulate your gross additions?

A. That is explained by the fact that my study is based

on the records and history of The Central Union Telephone Company, that is the former Central Union Telephone Company, Ohio Division, and the former Cleveland Telephone Company. Those two companies' records were maintained accurately back to 1913.

Since 1923 The Ohio Bell Telephone Company abandoned the keeping of individual records for the constituent companies making up The Ohio Bell Telephone Company as it exists today, and keeps only one set of books. I therefore was not able to get the years 1923, 1924 or 1925 for this study.

However, I have considered the activities of the present The Ohio Bell Telephone Company for those three years, and I will interject my thoughts on that as I go through. This study shows that as of the first of the year 1923 the two companies whose records I have used had slightly over $8,500,000.00 worth of central office equipment in service. I also——

[fol. 2460] Q. Wait a moment, isn't it something over $9,000,000.00?

A. Yes, it is something over $9,000,000.00.

Q. More nearly $10,000,000.00?

A. No, slightly over $9,000,000.00.

I find that by adding the gross additions which were made to the central office equipment account of the two companies before mentioned, in a reverse chronological order, that for ten years such accumulations were equal to almost $8,000,000.00. It was therefore necessary for me to project the gross additions curve back for a period of approximately three years before such gross additions would be equal to the plant in service as indicated for the year 1923.

Q. In other words, the chart shows the actual experience back to 1913, but from 1913 back to 1910 you have projected the curve or line on the basis of the experience in the subsequent years?

A. Yes, sir; the line projected through the years 1910, 1911 and 1912 is based on the activities of the telephone industry throughout the States of Illinois, Indiana and Ohio, and in my judgment reflects a situation as would be found on the books if such figures were available.

Commissioner Poor: Just a minute so we can follow you; didn't you project that back for a period of six years instead of three years?

Mr. McConnaughey: No.

Mr. Burr: Each square is one year?

[fol. 2461] The Witness: Each square is one year, Mr. Burr.

Commissioner Poor: I understand.

The Witness: I have skipped every other year in the numbering.

Commissioner Poor: I see.

The Witness: The activities in the central office equipment item for the years 1923, 1924 and 1925 as experienced by The Ohio Bell Telephone Company have been quite extensive. The gross additions have been of huge amounts so that the plant in service at the beginning of those years has not gone up at the same rate; that is the retirements have been of considerable magnitude. So that taking that into consideration I feel that the term of thirteen and one-tenth years, which I have indicated on this study is representative of the life of central office equipment based on the dollar turn-over.

I have also made a study of boards which have been retired, not on a money basis but on a board basis, and I find that the former Central Union Telephone Company in the Ohio Division, for sixty-six boards retired on account of causes other than unification or merger, has experienced a board life of 8.3 years.

I have also studied the board life of switchboards retired by The Ohio State Telephone Company. The total number of units or positions studied was 522. The total position or unit years was 3537, which gives an average life of 6.7 plus position or unit years.

Mr. McConnaughey: That applies to positions retired?

[fol. 2462] The Witness: Yes, sir. Taking all of these facts into consideration a life of somewhere between thirteen and six years is obtained, and I have used twelve years which I feel is justified by the facts as revealed by our records.

By Mr. Burr:

Q. Do you mean twelve or ten years that you have actually used?

A. This study shows twelve. We actually used ten.

In order to determine the salvage which the company realizes on this equipment at the time it is retired from

service in its first location, statistics were taken from the records of the company, that is on records of The Central Union Telephone Company, Ohio Division, and The Cleveland Telephone Company, for the years 1913 to 1922 inclusive. Therefore I have used the salvage experience of The Ohio Bell Telephone Company as it is now constituted. The salvage experience as just mentioned is fourteen plus per cent. on a weighted basis, and sixteen and one-half on a straight average basis. I have used fifteen per cent. Now then one hundred per cent. less salvage of fifteen per cent, would give net loss of eighty-five per cent.

Mr. McConnaughey: Your Exhibit No. 4, Mr. Schneider, shows seventeen and eighty-three per cent.

The Witness: That is right.

Mr. McConnaughey: You said fifteen and eighty-five.

The Witness: That is right. Those are the judgment figures, and the figures I am now testifying to are actual [fol. 2463] experience figures.

Mr. Connaughey: Well, it is a bit confusing when you say you have used something and the only evidence we have of your use of it is in this exhibit. But go ahead. It is your story.

The Witness: Well, if it is going to be conflicting I will say we will drop Exhibit No. 4 and not talk about it, because what I am talking about now is the actual experience of the company as reflected by its records. Exhibit No. 4 contains figures which we have been using, and they are based on our judgment and have nothing to do with the exhibits which will be filed subsequent to Exhibit No. 4.

Mr. McConnaughey: Well, is this exhibit the exhibit you expect to use in fixing the allowance for depreciation.

The Witness: Yes, sir.

Mr. Burr: By "this exhibit" you refer to Exhibit No. 4 do you, Mr. McConnaughey?

Mr. McConnaughey: Yes; just so I understand what he is talking about as he goes along.

By Mr. Burr:

Q. Go ahead.

A. The net loss of 85 per cent. divided by twelve years yields an annual rate of 7.13 per cent., which is the annual rate at which central office equipment is consumed in rendering service.

The next class of equipment which it is possible to analyze and test is that of station apparatus, P. B. X. and booths. [fol. 2464] Q. And special fittings?

A. And special fittings, yes, sir.

Mr. Burr: The exhibit on the subject may be marked as Schneider Exhibit No. 6, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 6.

Q. Explain Schneider Exhibit No. 6.

A. I have taken station apparatus, private branch exchange equipment, and booths and special fittings as one item, because in arriving at salvage figures the company has not kept such figures individually as between those three items that I have just mentioned. I therefore have arrived at a service life of the composite dollar and will treat salvage as a percentage of these three items of property.

I have again used the turn-over cycle method, that is accumulating the gross additions to the station apparatus, private branch exchange, and booths and special fittings accounts in a reverse chronological order, and made a comparison of such accumulations with the plant in service at the beginning of the various years, as indicated on this exhibit. This turn-over indicates a minimum service life of 3.8 years, and a maximum service life of 4.6 for this class [fol. 2465] of equipment, and is the service life of this class of equipment in one location. I have three other exhibits for these equipment items which indicate the same service lives obtained in a different manner.

Mr. Burr: They may be marked respectively as Schneider Exhibits 7, 8 and 9, and are offered in evidence.

And thereupon the documents last above referred to are admitted in evidence on behalf of The Ohio Bell Telephone Company and are herewith submitted and marked respectively Schneider Exhibit No. 7, Schneider Exhibit No. 8 and Schneider Exhibit No. 9.

Q. Proceed.

A. Exhibit No. 7 shows a slightly different application of the turn-over cycle with respect to station apparatus,

private branch exchanges, and booths and special fittings. In this picture I have taken plant retirements by years and accumulated them in a reverse chronological order until they are equal to the plant in service at some particular time. In this picture the plant retirements reached the plant in service at the beginning of the year at two points; the first probably four months subsequent to the year 1917, and again about two months subsequent to the beginning of the year 1919.

From those two points I have accumulated gross additions in a reverse chronological order until such gross additions reach the base line. Measuring along the base line [fol. 2466] from the intersection of the gross addition line with the base line to the intersection of the plant retirement line with the base line, we find a period of eight and one-half years, and approximately eight years for the two spans.

These figures represent the life from the time of installation until the time of retirement, and in order to arrive at the average life, should be divided by two which yields a figure of about four years as the service life of this class of equipment. That compares with the service life as indicated on my Exhibit No. 6.

My Exhibits 8 and 9 treat with station apparatus only and were prepared in exactly the same manner as my Exhibits 6 and 7 and are introduced to show that the station apparatus in itself is the dominant factor in connection with the lives which were indicated on Exhibits 6 and 7.

The life in dollars of station apparatus, P. B. X., and booths and special fittings is 4.1 years, being the actual experience of the companies studied.

The salvage experience for these three classes of property was taken from The Central Union Telephone Company, Ohio Division, and The Cleveland Telephone Company for the years 1913 to 1922 inclusive. For the years 1923 to 1925 the entire Ohio Bell Telephone Company's records were used.

These records indicate a weighted average for salvage of 61.7 per cent and a straight average of 69.1 per cent. A fair average figure, therefore, should be 65 per cent.

[fol. 2467] With a life of 4.1 years and a salvage of 65 per cent we will obtain a rate of 8.53 per cent as the per-

centage of this class of property consumed annually in rendering telephone service.

The next class of property which could be studied from the records is the pole line. The company doesn't keep those salvage accounts separated as between exchange and toll poles, and as a result I have made a study embodying both classes of poles as one unit.

Q. Is it represented by the blue print marked Schneider Exhibit No. 10?

A. It is.

Mr. Burr: We offer Schneider Exhibit No. 10 in evidence.

And thereupon the blue print last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 10.

Q. Proceed with a discussion of the exchange and toll pole lines.

A. Exhibit No. 10 again sets forth the turn-over cycle method as applied to exchange and toll pole lines considered as one class.

Since the records of the companies studied were not available for this particular class of property prior to 1913 it was necessary that I review the activities of The Central Union Telephone Company operating throughout the States [fol. 2468] of Ohio, Indiana and Illinois, and the activities of The Cleveland Telephone Company for those years prior to 1913.

As a result of those studies in investigations I have drawn a dotted line which in my judgment accurately reflects what the experience, if available for this class of property, would have been.

The activities of the present The Ohio Bell Telephone Company subsequent to 1923 are such that it is my belief that the 14.5 years as indicated on this study is, if anything, the maximum. For the purposes of this study I have rounded out the 14.51 years to 15 years.

The salvage experience of the former Central Union Telephone Company, Ohio Division, and The Cleveland Telephone Company for the years 1913 to 1922 inclusive, and the salvage experience of The Ohio Bell Telephone Company for subsequent years, indicates that a weighted

average for salvage is 3.69 per cent. red or minus, and the straight average salvage experience was 2.75 per cent. red or minus. I have used a salvage figure of minus 3.2 per cent.

With a life of 15 years and a salvage of minus 3.2 per cent we obtain a rate of 6.88 per cent. as the rate at which exchange and toll pole lines are consumed annually in rendering service.

Q. Have you prepared a similar study for exchange and toll aerial cable?

A. Yes, sir.

[fol. 2469] Mr. Burr: It may be marked as Schneider Exhibit No. 11, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Schneider Exhibit No. 11.

Q. Explain it please.

A. For the reason that the telephone company doesn't keep its salvage experience separated as between exchange and toll cable I have consolidated these two classes of property in this study. The blue print, Exhibit No. 11, is a picture of the turn-over cycle method as applied to exchange and toll aerial cable.

The records as testified to heretofore in connection with poles and central office equipment do not extend beyond the year 1913.

I have made a study of the activities of The Central Union Telephone Company for the years subsequent to 1913, and have indicated by the dotted line my summarization of the activities experienced in those years.

The service life of exchange and toll aerial cable as indicated in this exhibit for property in one location is 15.85 years. I have rounded that out to 16 years.

The salvage experience of The Central Union Telephone Company, Ohio Division, and The Cleveland Telephone Company for the years 1913 to 1922 inclusive, and the salvage experience of The Ohio Bell Telephone Company for [fol. 2470] the years 1923 to 1925 inclusive show a weighted salvage of 18.9 per cent and a straight average of 27.8 per cent. I have used a salvage of 23½ per cent, lying somewhere between the two rates I previously mentioned, giving

me a life of 16 years and a salvage of 23½ per cent, and enabling me to arrive at a rate of 4.78 per cent as the rate at which toll and exchange aerial cable are consumed annually in rendering service.

Q. Have you a similar study showing exchange and toll aerial wire?

A. Yes, sir.

Mr. Burr: It may be marked for identification as Schneider Exhibit No. 12 and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 12.

Q. Explain the exhibit if you please.

A. Exhibit No. 12 is the application of the turn-over cycle method for exchange and toll aerial wire. Again the company does not differentiate as between toll and exchange aerial wire so far as the salvage is concerned, and I have therefore treated the two as one class. This exhibit shows that the life in one location for exchange and toll aerial wire is 10.35 years. I have used 10½ years.

The salvage experience of The Central Union Telephone [fol. 2471] Company and The Cleveland Telephone Company for the years 1913 to 1922 inclusive, and The Ohio Bell Telephone Company for the years 1923 to 1925 inclusive, show a weighted average of 4.6 per cent and a straight average of 11.2 per cent. I have used a salvage of 7½, lying somewhere between these two.

Using a life of 10.5 years and a salvage of 7½ per cent, and treating only 20 per cent of the drops, I get a rate of 7.75 per cent as the rate at which exchange and toll aerial wire is consumed annually in rendering service.

Mr. Burr: The last exhibit on this subject is that pertaining to exchange and toll underground cable. It may be marked for identification as Schneider Exhibit No. 13 and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Schneider Exhibit No. 13.

Q. Explain the application of the exhibit.

A. Exhibit No. 13 again is the application of the turn-over cycle method to the exchange and toll underground cables.

For the reason that the companies' experiences relative to salvage are not chronicled as between exchange and toll, I have consolidated these two classes of property into one.

[fol. 2472] Reviewing the activities throughout The Central Union Territory and The Cleveland Telephone Company for the years prior to 1913, I have extended the curve of known facts or gross additions to a point where such gross additions are equal to the plant at the beginning of the year 1923, and such extension indicates a service life in one place of sixteen years for the combined exchange and toll property.

The salvage experience of The Central Union Telephone Company, Ohio Division, and The Cleveland Telephone Company for the years 1913 to 1922 inclusive, and the salvage experience of The Ohio Bell Telephone Company for the years 1923 to 1925 inclusive was 31.8 per cent on a weighted average basis, and 32.4 on a straight average basis. I have used 32 per cent.

Using a 16 year life with a 32 per cent salvage I find an annual rate of 4.25 per cent as applicable to the exchange and toll underground cables, which reflects the rate at which this class of property is being consumed in rendering telephone service.

In connection with the study of depreciation as outlined and testified to in connection with my Exhibits 5 to 13 inclusive, nothing has been allowed for extraordinary repairs. The rates as indicated and testified to as being judgment rates in Exhibit No. 4 include an allowance for extraordinary repairs. I have studied the actual experience of The Central Union Telephone Company and The Cleveland Tele-
[fol. 2473] phone Company for the years 1913 to 1921 inclusive, and the extraordinary repairs of The Ohio Bell Telephone Company for the years 1922 to 1925 inclusive. This experience shows that the ordinary repairs expressed as a percentage of the plant in service at the beginning of the year on a weighted average basis was .35 of one per cent., and on a straight average basis .54 of one per cent. I have used a figure of .45 of one per cent for the classes of plant which we studied.

In order to check the judgment figures which we have used, and which are indicated in my Exhibit No. 4, with the

actual experience of the company as testified to in connection with my Exhibits 5 to 13 inclusive for those classes of property which it is possible to check, I have made a calculation and find that, applying the rates as indicated in Exhibit No. 4 to the appraisal of the classes of property studied, the appraisal having been testified to by Mr. Williams, a composite rate of 6.89 per cent is obtained. That 6.89 per cent applies to central office equipment, station apparatus, private branch exchanges, booths and special fittings, exchange and toll pole lines, exchange and toll aerial cable, exchange and toll aerial wire, and exchange and toll underground cable.

Applying the actual experience of the company as reflected in Exhibits 5 to 13 inclusive, together with my oral testimony relative to salvage, I find that with the inclusion of .45 of one per cent for extraordinary repairs, that the composite rate is 6.96 or .07 of one per cent in excess of the [fol. 2474] rate determined by our judgment figures.

Mr. Burr: Have you any questions at this time, Mr. McConnaughey?

Mr. McConnaughey: I just want to ask one or two questions.

Cross-examination.

By Mr. McConnaughey:

Q. In projecting this curve back of 1913, just how have you gotten the basis for that?

A. Prior to 1913 the books were not kept individually as between operating divisions. The Central Union Telephone Company's accounts were kept as one figure.

Another reason why it was not possible to analyze the figures for a particular class of plant is that prior to 1913 the companies kept their accounts in a somewhat different form than that prescribed by the uniform system of accounts.

I did study the books, records and activities of the companies prior to 1913, but was not able to obtain figures which would fit or merge into a study like this, and it was therefore necessary for me to formulate my opinion and judgment and project the line of gross additions, which is represented by a dotted line in these various exhibits, as being typical and representative of the activities in the com-

[fol. 2475] panies through the territory operated by them.

Q. Did you obtain any figure at all that you used, or was it purely a judgment figure based on a survey of the entire—of the general growth of the plant?

A. The general growth of the plant and the growth of that particular class of property.

Q. You did have some figures to work with them?

A. Oh yes, the equipment account, for instance, included station equipment and central office equipment, and I just studied that particular account.

The pole lines for I think the Central Union Telephone Company were consolidated with the outside plant, but The Cleveland Company was able to obtain the pole line account separately back to 1913.

Q. Do you have whatever figures you used in your working papers?

A. No, sir; they are up in Cleveland.

Q. You have them some place?

A. Yes, sir.

Q. And they are available for checking I suppose?

A. Oh, yes.

Mr. McConnaughey: That is all now.

Commissioner Poor: Have you any further questions to ask of Mr. Schneider at this time?

Mr. McConnaughey: I would like to ask him one more question.

By Mr. McConnaughey:

Q. Can you tell what basis the company used in setting up its depreciation reserve on its accounts?

A. You refer to——

[fol. 2476] Q. Does the company determine what amount shall be charged to its depreciation reserve, or I should say credited to its depreciation reserve?

A. They have on file with the Interstate Commerce Commission a set of rates which I think they are using as the rates applicable to the book figures.

Q. Does that have any relation to your Exhibit No. 4; these percentages?

A. No, sir.

Q. You are not in a position now to give us the schedule?

A. No, I am not, Mr. McConnaughey.

Mr. McConnaughey: That is all.
Commissioner Poor: Is that all at this time?
Mr. Burr: Yes.
Commissioner Poor: Then we will adjourn this hearing until February 25th and 26th, being Thursday and Friday.

And thereupon the further hearing of this case was adjourned until Thursday, February 25, 1926, at 10 o'clock, A. M.

[fol. 2477] Morning Session

Thursday, February 25, 1926.

And thereupon the further hearing of this case was resumed, pursuant to adjournment, before Honorables Charles C. Marshall, George T. Poor, and Frank B. Maullar, Public Utilities Commissioners.

Appearances:

Messrs. S. H. Tolles and Karl E. Burr, on behalf of The Ohio Bell Telephone Company;
Messrs. W. S. McConnaughey, and Fred W. Postle, Special Counsel, on behalf of the State of Ohio;
Mr. F. M. Dotson, Law Director, on behalf of the City of Toledo, Ohio;
Mr. Charles A. Leach, Law Director, on behalf of the City of Columbus, Ohio;
Mr. J. B. Harshman, Law Director, on behalf of the City of Dayton, Ohio.

[fol. 2478] Colloquy

Chairman Marshall: Gentlemen, if you are ready, you may proceed.
Mr. Burr: Mr. Williams was asked to produce a copy of the lease covering what is known as the old Columbus Citizens Telephone Company property on North Third Street, now owned by The Ohio Bell Telephone Company, that being the lease containing a privilege of purchase of the property for the sum of $75,000.
It may be marked for identification as Williams Exhibit Number 13, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 13.

Mr. Burr: Mr. Williams was also asked to prepare a statement showing the exchange inventory dates covering inventories heretofore made of exchange and toll property of The Ohio Bell Telephone Company; showing also the purposes for which the inventories were made and the Public Utilities Commission case numbers, wherever the inventory was used in a case before the Commission.

The statement has been prepared and it may be marked for identification Williams Exhibit Number 14, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams [fol. 2479] Exhibit Number 14.

Mr. Burr: Mr. Williams was also asked to furnish a copy of the contract between The Western Electric Company and The Ohio Bell Telephone Company covering the installation at the Forest Exchange of the company in the City of Toledo.

The copy has been prepared and may be marked for identification as Williams Exhibit Number 15, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Williams Exhibit Number 15.

Mr. McConnaughey: Mr. Burr, I don't believe that statement is quite accurate. What he was asked to furnish was a typical specification showing the Western Electric engineering. It was not for a specific order; it was a typical order and the filling of it.

Mr. Burr: I believe you are right, and the exhibit in question shows such a typical order, and of course the acceptance of the order made it a contract.

Mr. McConnaughey: Well, we wanted to be sure that we were talking about the same thing.

Mr. Burr: Mr. Williams was also interrogated with re-

spect to the so-called Huron Road property, purchased by The Ohio Bell Telephone Company, with particular refer- [fol. 2480] ence to the building located on the property at the time of its purchase.

Without taking the stand, if it is agreeable to counsel on the other side, Mr. Williams may answer your question from where he sits.

Mr. Williams: I find that after the Huron Road parcel was purchased there was no division made as between land and building costs, partly for the reason that we did not pay a separate consideration for the land and the building, and partly because it was the intention to immediately wreck the building. And according to the provisions of the accounting system in a case of that kind, we are allowed to put the full purchase price into the 211 Land Account, and that was what was done.

The amount in the Land Account as of June 30, 1925, represented the purchase price minus a deduction for salvage of about $1100, plus a cost of dismantling and transportation of about $156 or $157. So that the amount appearing on the books is practically the same as was paid for both the land and the building.

Now the same situation prevails relative to the parcel of land at 35th Street and Searsdale Avenue, Cleveland.

At the time we purchased that particular parcel there were a couple of barns on the lot and the contractor who has the contract for removing the building on that lot removed one of the barns without charge, and has the use of the other barn for storage purposes during the erection of [fol. 2481] the new building, after which he will remove that, without charge.

The purchase price as between land and building was not divided, and for the same reasons as I have given for the Huron Road parcel.

So that the amount set up in the 211 Land Account represents the purchase price as it appears on the books as of June 30, 1925, representing the value of land or the cost of land, plus whatever minor value might have been assigned to the building, but which in fact was not assigned individually to the building account. In other words, this represents the total cost price. It was all thrown into the 211 Account.

Mr. Burr: What is the Interstate Commerce Commission Rule on the subject?

Mr. Williams: That procedure is provided for in the Interstate System of accounts; not in the system of accounts itself, but in some of the special rulings.

This particular situation is covered in our Accounting Bulletin Number 24, Questions and Answers No. 371.

Mr. Burr: Have you any questions?

Mr. McConnaughey: That bulletin has been introduced in evidence, hasn't it?

Mr. Williams: I think that it has, yes, sir.

Mr. Burr: Have you any further questions to ask Mr. Williams at this time?

Mr. McConnaughey: No, I think not.

Mr. Tolles: Do you know about the character of the build-
[fol. 2482] ings on the Huron Road property?

Mr. Williams: It is my understanding——

Mr. Tolles: One of them is an old abandoned theatre.

Mr. Williams: Yes, that is true.

Mr. Tolles: And another was a very old hospital from which they were removing into a new plant.

Mr. Williams: Yes, it is my understanding that the buildings had very little use for any purposes at the time we purchased the property, and no use as far as telephone purposes is concerned.

Mr. Tolles: And an expense to get rid of them.

Mr. McConnaughey: Well that is downtown property in Cleveland?

Mr. Williams: Yes, sir.

Mr. Tolles: There was a hospital that had been there some fifty or seventy-five years and they bought a new site and were abandoning the old, and there was a theatre which had been abandoned for two or three years; so that the buildings were of absolutely no use to the company.

Mr. McConnaughey: The total salvage was about $1100?

Mr. Williams: The total net salvage was about $976, made up of the gross salvage of about $1133 and the cost of dismantling, about $176. The total cost of dismantling does not all appear in that $156; that is just a partial cost, and covered more the dismantling of these radiators and the heating system from which we received some salvage. Of course in addition to that there would be the dismantling
[fol. 2483] cost of the building itself, which will come along later.

Mr. McConnaughey: How did you get that net salvage of $1100?

Mr. Williams: That was the gross salvage, Mr. McConnaughey.

Mr. Tolles: They took out some radiators and got $1100 for them and it cost $150 to take them out.

Mr. McConnaughey: That does not take into account the buildings?

Mr. Williams: No, sir; that is being done, or was done subsequent to June 30th, 1925.

Mr. McConnaughey: I see; and at June 30, 1925, there were still old buildings on this site?

Mr. Williams: There were, yes, sir.

[fol. 2484] And also F. L. Rhodes called on behalf of The Ohio Bell Telephone Company, being first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. You are the Mr. Frederick L. Rhodes who testified in the so-called Toll Rate case, A. U. R. P. No. 124, on February 24, 1924?

A. Yes, sir.

Mr. Burr: All of the testimony, Your Honors, in that case is a part of the record in this case, by the Commission's order, but in order that there may be no question as to Mr. Rhodes' testimony in the toll rate case being also a part of the record in this case, we offer as a part of the record here Mr. Rhodes' testimony in the toll rate case, A. U. R. P. No. 124, where the same appears at pages 197 et seq. of the record in that case.

We also offer in evidence all of the exhibits which were introduced in evidence in connection with Mr. Rhodes' former testimony.

Mr. Burr: For the sake of brevity, The American Telephone & Telegraph Company will be hereinafter sometimes referred to as the American Company, and The Ohio Bell Telephone Company as the Ohio Bell Company, as was done in the toll rate case.

Q. At the time of your testimony in the toll rate case, what position did you occupy with the American Company, [fol. 2485] Mr. Rhodes?

A. Outside plant development engineer.

Q. What is your present position with that company?
A. The same.
Q. Generally speaking, what have been your duties and activities as outside plant development engineer, in the Department of Development and Research of the American Company since February 24, 1924?
A. A continuation of the same lines of work as I described in my qualifications at that time.
Q. Tell the Commission whether your former testimony with respect to the so-called license contract between the Ohio Bell company and the American Company, and between the General Staff of the American Company and The Ohio Bell Company applies with like effect today as it did on February 24, 1924, when you testified in the toll rate case?
A. I should say that it applied with like effect except that the organization of the Staff of the American Company is larger now than it was then, and the services have broadened out. There is a little difference in our relations with the Laboratory Organization, which perhaps you would like me to describe later.
Q. Yes, if you please.
A. With that exception, I should say that the previous testimony holds today.
The savings which have been made from improvements in the past are of course larger at the present time than they were then, and there have been new savings made as the result of the development work done during this two-year period.
[fol. 2486] Q. Are the moving considerations for the License Contract and the resulting benefits accruing to the Ohio Bell Company from the contract of the same general character as when you formerly testified?
A. I should say that they are the same.
Q. Are the various features with respect to the operation of the contract and the various results of it substantially the same as when you formerly testified?
A. So far as I am aware, that is the case.
Q. Do the Ohio Bell Company and the American Company function under the License Contract in the same general way as at the time of your former testimony?
A. The same general relationship holds.
Q. Do the same practices with respect to the operation

of the two companies under the contract obtain as they did at the time of your former testimony?

A. I believe they do.

Q. In your former testimony I believe you said that the services and advantages to the Ohio Bell company under the license contract applied alike to both the toll and exchange properties of the company, notwithstanding the fact that your testimony was then given in the toll case; is that still true?

A. Yes, sir; there is a large part of the work that affects the toll plant and there is another I think even larger part of the work that bears upon the exchange plant of the company.

Q. I believe you also gave the names of companies not controlled by the American Company but which have the same kind of license contract with the American Company as the Ohio Bell Company has, and which receive similar [fol. 2487] services under that contract.

A. There are two such companies.

Q. What are their names?

A. The Cincinnati and Suburban Bell Telephone Company, and the Southern New England Telephone Company.

Q. What payments did those companies made for these services under the license contract, or how does that payment compare with the one made by the Ohio Bell Telephone Company?

A. I understand it is on the same basis, 4½% of the gross revenue, with one or two minor exceptions for uncollectibles; in general, 4½% of the gross earnings.

Q. Are there any non-controlled companies of that kind which still receive the service under the License Contract?

A. Yes, those two companies which I have named.

Q. Does the Long Lines Department of the American Company still pay 4½% of its gross earnings to the American Company for the License Contract services, as testified to by you at the former hearing in the toll case?

A. I believe it does.

Q. Are the several departments of the General Staff substantially the same, and are their functions substantially the same as described in your former testimony?

A. Well, they have the same general functions, but in nearly every case the personnel is greater on account of the larger amount of work being done.

Q. Are the policies of the American Company with respect to its dealings with the associated companies, including the Ohio Bell company, the same today as described [fol. 2488] in your former testimony?

A. So far as I know, and so far as I can see from my work, the License Contract services are being performed in the same general way.

Q. Are the services of the various departments of the General Staff as available to the Ohio Bell company today as they were at the time of your former testimony?

A. I believe so, yes, sir.

Q. Is the relationship between the American Company and the Western Electric Company substantially the same as when you testified, and do the two companies, insofar as the associated companies are concerned, function with respect to each other in substantially the same was as in February, 1924?

A. Well there has been a change made which does not affect the nature of the work; but at that time what we term The Bell Laboratories were operated by the Engineering Department of the Western Electric Company.

For purposes of more satisfactory operation and supervising co-ordination the laboratories have been organized as a separate corporation, known as The Bell Telephone Laboratories, Incorporated, and the president of that corporation is the vice-president of The American Company, in charge of the Department of Development and Research, which ties these organizations more closely together.

The Bell Telephone Laboratories is owned jointly by the American Company and The Western Electric Company, and is a non-profit organization.

Q. You testified in the toll case that the General Staff of the American Company then consisted of 1824 people; [fol. 2489] that is to say, it consisted of that many at the close of 1923. Can you bring that information more nearly up to date?

A. Well, at the end of the year 1925 it consisted of very nearly 2100 people; specifically, 2097.

Q. In your testimony in the toll case. you stated, I believe, that the Department of Development and Research of the General Staff of The American Company consisted of 363 employees as of December 31, 1923; can you give a later figure with respect to that department?

A. As of December 31, 1924, there were 449.

Q. Have you a chart which shows in general the development of The Development and Research Department of the American Company?

A. Yes, sir, this chart shows it as of October 1st, 1925.

Mr. Burr: It may be marked for identification Rhodes' Exhibit A-1, and we offer it in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-1.

Q. Will you explain the chart briefly?

A. On chart number 1 is shown the vice president, and assistant vice president at the head of the department, and in parentheses, beneath that block is the figure 449, which means that there are 449 people reporting to the Department Heads.

[fol. 2490] Then in the next line come the sub department heads, reporting to the executive head, and their immediate staffs follow.

Now in the succeeding pages each one of these sub departments is taken up in detail and the organization is shown, giving the names of the people and brief statement showing the nature of the work upon which they are engaged.

Q. You also testified in the toll case that the Department of Operation and Engineering of the General Staff of the American Company consisted of some 529 employees as of December *s*1, 1923; can you bring that information more nearly up to date?

A. That department as of December 31, 1925, had 605 employees.

Q. Have you a chart of the department?

A. Yes, sir (producing same).

Mr. Burr: The chart may be marked for identification as Rhodes' Exhibit A-2, and is offered in evidence.

And thereupon the chart last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-2.

Q. Give a brief explanation of the chart, if you please.

A. Its general arrangement is the same as that of the Department of Development and Research. That is, on Chart One is shown the vice president and Chief Engineer, at the head of the Department.

[fol. 2491] The figure beneath, 603, indicates that number of employees reporting to him, and I might say here that similarly the Department of Development and Research all the way through the figures in parentheses show the number of people reporting to the individual beneath whose name the figures appear.

Then again, talking about Chart One of the Department of Operation and Engineering, the men reporting to the vice president are shown with their department heads, and on the succeeding charts, 2 to 6 inclusive, are shown the subdivisions of the Department of Operation and Engineering in detail, with the names of the employees given in most cases, except in the case of clerks, with a brief description of the line of work upon which these people are engaged.

Q. In the toll case you testified that as of January 1st, 1924, the American Company owned, controlled, or was licensed under, 4678 patents and that there were applications pending at that time for 2742 additional patents. What is the fact with respect to the patents today, the patents and applications?

A. Two years later, that is as of January 1st, 1926, the number of patents owned, controlled or under which a license was held by the American Company, amounted to about 6700, and as of that same date the number of applications pending was about 2800.

Q. During the years 1924 and 1925, how many patents have issued which the American Company either owns or controls or is licensed under?

A. There have been over 1200 issued in this two-year period which the American Company either owns or con-

[fol. 2492] trols and about 230 under which it has practically exclusive rights, and nearly 100 under which it holds non-exclusive licenses.

Q. Are those patents applicable to the telephone business?

A. Yes, sir, in varying degrees.

Q. Have you a list of them?

A. Yes, sir.

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-3, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-3.

Q. Now, with respect to the applications which are pending; I am not going to ask you to discuss them; but those patents, if granted, will be referable to the future work of your department?

A. Why, they may or they may not. They are taken out with the expectation that they may cover certain lines of development work which we will follow up. We cannot tell; and it is desirable to have protection by patents along whatever line the development work may lead us into.

Q. Approximately how many general engineering circulars, traffic circulars, development research bulletins, specifications and commercial letters, circulars and bulletins have been issued and sent by the American Company to the [fol. 2493] Ohio Bell Company in the past two years, if you know?

A. Approximately 600.

Q. Have you a list of them by titles?

A. I have a partial list; it is not strictly complete, but it gives the titles, and it gives the dates on which they were sent out; that is, this is a list of the General Engineering Circulars. (Producing same).

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-4, and it is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-4.

Q. Have you a list, by titles, of the Development and Research bulletins?

A. I have (producing same).

Mr. Burr: It may be marked for identification Rhodes' Exhibit A-5, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-5.

Q. How many of those bulletins are there?
A. Well I have not counted them up.
Mr. Dotson: Each item represents a separate bulletin, [fol. 2494] does it?
The Witness: Yes, it does.

By Mr. Burr:

Q. It is not necessary to count them; you can approximate the number.

Mr. Tolles: There are 21 on the first page and there are 5¼ pages.
The Witness: There are about 110 in this Exhibit A-5.

Q. I neglected to state, in identifying your Rhodes Exhibit A-4, that it consisted of 13 pages; that is correct; isn't it?

A. I do not know without looking at it; that is right.

Mr. Dotson: What do you call a bulletin?
The Witness: Why it is a piece of information which indicates to the associated company the results of some completed piece of development work. It tells them what the results of that work are. It may vary from a few typewritten pages to a large book accompanied by many drawings; but it represents in each case the results of a completed piece of work, and tells them what has been accomplished so that they can use it in their business.
Mr. Dotson: These bulletins are issued voluntarily from time to time by the American Company when it is prepared to furnish them?
A. Whenever a piece of development work is completed that is the method in which, under the License Contract, the information is furnished to the associated companies.
Mr. Dotson: And they are not issued then at the specific request or requisition from any of the associated com- [fol. 2495] panies?
The Witness: They are furnished with one by the American Company when the work is completed. Then if they

wish extra copies they can obtain them from the American Company.

By Mr. Burr:

Q. Have you a list of the specifications referred to in your previous answer?

A. I have.

Mr. Burr: It may be marked for identification Rhodes' Exhibit A-6, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-6.

Q. The exhibit consists of three pages?

A. That is right.

Q. Counsel have requested that I ask you to explain the difference between Exhibits A-4, and A-5; will you please do so?

A. That is, those are the general engineering circulars and the Development and Research bulletins?

Q. Yes.

A. The General Engineering Circulars are issued by the Department of Operation and Engineering. The Department of Research bulletins are issued by the Department of Development and Research; and the difference between them goes right to the fundamentals of the functions of those departments, which are these:

The Department of Development and Research is responsible for developmeng new materials, systems and appa-
[fol. 2496] ratus.

The Department of Operation and Engineering is responsible for advising the associated companies, like the Ohio Bell Company, as to the best methods and plans for making use of those developments.

That is to take a specific case, if the Department of Development and Research produces a new form of insulated wire, its bulletin will describe the properties of that wire, and the Development and Research specifications will specify in detail the properties which that wire should have when complete—the manufacturing instructions for it. Now the general engineering circular on that subject which goes

to the associated companies tells them the best way to employ that wire in their plants; the best methods for tying it to the insulators and for stringing it along buildings.

Will that serve to answer your question?

Mr. McConnaughey: Yes.

By Mr. Burr:

Q. Have you an exhibit showing some examples of General Engineering circulars?

A. Yes (producing same).

Mr. Burr: The first one may be marked for identification as Rhodes' Exhibit A-7, and is offered in evidence.

And thereupon the document above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-7.

[fol. 2497] Q. Will you explain it, Mr. Rhodes?

A. This is a bulletin that deals with a description of a portable creosote spraying device which has been designed for the purpose of applying creosote oil preservative treatment to poles already in place in the plant.

Now this particular apparatus was worked up by the Department of Operation and Engineering, but the development work upon which it rests, the experimental treatment of poles in the plant years ago, with a spray treatment, and the extent to which periodic measurements have shown that decay has been postponed, were performed by the Department of Development and Research.

Now this bulletin tells the associated companies what these machines are like and how they can be obtained.

Q. Have you another example of the General Engineering circulars?

A. Yes, I have one which will be Rhodes' Exhibit A-8 (producing same).

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-8, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-8.

Q. Will you explain it?

A. This is on the subject of earth boring machines, which describe- a special equipment which has been devised for [fol. 2498] drilling the holes in which poles are set in the earth. It contains very complete information about this device.

Q. One more example of a General Engineering Exhibit, if you have it, Mr. Rhodes, if you please; have you one?

A. Yes (producing same).

Mr. Burr: It may be marked for identification Rhodes' Exhibit A-9, and we offer it in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-9.

The Witness: Now this is typical of something which occasionally happens where a General Engineering circular of the Department of Operation and Engineering, and a bulletin of the Department of Development and Research are sent out simultaneously, and it illustrates the case which Mr. McConnaughey was interested in of a bulletin describing the equipment improvement itself, whereas the circular letter refers to the means and methods of putting it into operation.

Q. Have you some examples of development and research bulletins? If so, the first one may be marked for identification as Rhodes' Exhibit A-10. Have you such an exhibit?

A. Yes (producing same).

[fol. 2499] Mr. Burr: We offer it in evidence as Rhodes' Exhibit A-10.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-10.

Q. I will ask you to explain it.

A. This is a bulletin dealing with the results of tests which our Department made of a considerable number of Eastern Cedar Poles; breaking these poles under a measured load in order to determine their fibre strength which

is the basis of the engineering computations of determining the average strength of poles.

There had been considerable doubt in the minds of some of the telephone engineers as to whether the Eastern Cedar poles which were being obtained at the present time were not weaker than those which were obtained a number of years ago, and which had been tested and on the basis of which tests the engineering was planned.

Our engineers conducted these tests and the results are tabulated in the sheets at the end of the bulletin. In this particular case the result was that the present basis of engineering was confirmed.

It might seem as though that, in a way, was a negative result, but it was something that was not known before that time and it served to enable the engineers to base their work in confidence on the results of these tests.

We conducted other series of tests on Western Cedar [fol. 2500] and creosoted yellow pine and chestnut which enabled us to raise the allowable fibre strength modulus of rupture and to allow poles of these timbers to remain longer in service, and in the case of new poles to enable somewhat slimmer and cheaper poles to be employed in certain parts of line construction.

Q. Have you another of the Department of Development and Research bulletins?

A. Yes.

Q. What is its subject?

A. This deals with non-quadded small gauge cables, sheath thicknesses.

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-11 and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-11.

Q. Will you explain the exhibit a little further, if you please?

A. Now, this is a bulletin of only a half dozen or so pages, but it deals with a very important subject.

When I was here two years ago, I think I referred to some preliminary work that had been done in decreasing

the thickness of the sheaths of lead covered cables, and I mentioned that a first step had been taken which my memory serves me led to a saving of about $200,000 a year in the case of cables purchased annually by the companies of [fol. 2501] the Bell system.

That work has continued, and the experience with the cables thus made and further experience with experimental cables which have been in the plant for several years, indicated that a further decrease in sheath thickness could be made, and a start has been made in that direction already.

Twenty-five per cent of the output of cables of certain sizes are being made with this thinner sheath, and steps have already been taken to place the entire output of lead-covered cable this year on a thinner sheath basis, which will result in an economy to the associated companies of more than $1,500,000 in the case of cables purchased in a single year. And that has become very important in recent years on account of the increasing price of lead.

Q. If you have with you another example of the Development and Research bulletins, Mr. Rhodes, will you please produce it? You have one, have you?

A. I have.

Q. What is its subject?

A. It is Section 1-D of Transmission Maintenance Practices dealing with what we term the 3-B Transmission Measuring set.

Mr. Burr: It may be marked for identification A-12, and is offered in evidence.

And thereupon the document above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Rhodes' Exhibit A-12.

[fol. 2502] The Witness: This consisted of section one, that is the first section; it is followed by section 1-E and 1-F, which deal with the other types of transmission measuring sets.

In a telephone plant, in order that the transmission will not fall off, and the plant gradually deteriorate into a state of general debility from a transmission standpoint, it is necessary to make periodic tests or measurements of transmission, and in order that the associated companies may do this, apparatus has been devised by the General Staff which

is described in these bulletins, which enable these periodic measurements to be made and determine that the transmission in being kept up to the mark.

Q. Have you some typical examples of specifications?
A. Yes.

Mr. Burr: The first one may be marked for identification Rhodes' Exhibit A-13, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-13.

Q. Describe the exhibit.
A. Exhibit A-13 is an engineering hand-book describing the best methods to employ in underground conduit construction.

Q. Why is it in the somewhat peculiar form that it is with holes punched in the top and a bite taken out of the lower [fol. 2503] right hand corner of the pages?

A. Why that is so that it can be bound in a flexible cover and carried by the foreman on the job. The holes at the top enable it to be bound in a cover and the holes at the bottom are for convenience in turning the pages with the thumb.

Mr. Burr: The subject of the exhibit is "Underground Conduit Construction", and it has been offered in evidence. It consists of 147 pages.

If you have another typical example of the specifications, will you please produce it?
A. Yes.
Q. What is its subject?
A. Its subject is Pole Line Inspection.

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-14, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-14.

Q. Explain it, if you please.
A. Well, there is in the case of different pole lines carry-

ing different loads in different parts of the country and under different conditions a certain point beyond which the engineers of the operating companies, the associated companies, do not consider that it is safe to allow the strength of the poles to fall below. Now that means that when periodic inspections of the poles are made and they fall below [fol. 2504] a certain diameter of circumference of good wood, that under those conditions it is time to replace the pole.

Now in order that that may be systematized and not depend upon the judgment of an individual in one place, the judgment of an individual in another place, which might not agree, arrangements are made whereby a certain inspection table in this book is picked out which is based on the strength characteristics which that line should meet and the circumstances in inches of the poles to meet that strength are given. So this serves as the basis upon which the lines can be systematically inspected and the replacement controlled upon a sound engineering basis.

Q. If you have any other example of the specifications, Mr. Rhodes, we would like to see it.

A. Yes. These are specifications for a three-pole guy clamp.

Mr. Burr: It may be marked for identification as Rhodes' Exhibit A-15, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-15.

Q. Explain it, please.

A. In our Department of Development and Research we try to improve all the time every piece of apparatus that is [fol. 2505] used in the plant, and we are testing proposed improvements, and when we find an improved form of guy clamp we test that in the laboratory for its holding power. It serves to join two pieces of strand together, or to dead-end a guy strand or a strand that is used to support aerial cables.

We will test these clamps of various designs and determine their holding power up to the point where they slip, and we are able frequently to make improvements.

In this case we were able to make a clamp that was so

strong in its holding power that where three clamps had formerly been used, two could do the work, and in many cases one would do the work where two clamps were formerly used.

Now the specifications for this piece of material are covered in details in this form, and in this particular case Exhibit A-15 shows the specifications for this type of guy clamp.

Q. These circulars, bulletins and specifications have all been developed since your testimony in the toll rate case have they not?

A. I think that is true.

Q. Has the development and research work of the American Company been going on continuously during this two-year period; that is to say, the period of approximately two years since you testified in the toll rate case?

A. It has.

Q. Can you mention a few typical instances of work accomplished by the Department during this two-year period?

A. Yes; two years ago I referred to the fact that we were at work on a cheaper form of drop wire.

[fol. 2506] Now a drop wire is the insulated wire that connects the subscriper's premises with the open wires on a pole line or the nearest terminal on an aerial cable.

For a great many years for that purpose there was employed a twisted pair of two wires. Each wire was covered with an insulating compound, and that was covered with a cotton braid, saturated with wax, and those two wires were twisted together in a pair. And I think two years ago I described that we originally used a hard drawn copper wire, and then we found that we could replace that with great economy by using a smaller conductor of copper steel.

That was followed by a bronze conductor which did not bring the first cost down, but it produced a considerable salvage value, which the bronze had and which the copper steel wire did not have.

Q. These are all developments of the Department of Development and Research?

A. That is right.

Q. Proceed.

A. We did not develop the copper steel wire but it was something on the market that we applied for this purpose. But in all those cases we had two wires separately insulated and twisted together.

We sought to make an economy by placing two rubber-covered wires under a common braid, and in that way we saved in the cost of the cotton and in the amount of wax, and we saved in the manufacturing cost of the wire.

I stated two years ago that we expected to save two hundred thousand dollars a year to the associated companies by that improvement. I was not aware, at that time, of [fol. 2507] what was going to happen in the cost of rubber, nor in the cost of cotton. And it really works out that at the present time the saving is more than five hundred thousand dollars a year.

Q. To the associated companies?

A. To the associated companies, yes, sir.

Now, we have made an improvement in this period of time in the flame-proof wire that is used on distributing frames in central offices, and this is an interesting case as showing how the change in price of the basic materials will prove in, as they say, a different structure at one time from what was economical before.

We have been using for this purpose a wire which was covered with enamel and then wrapped with a braid of silk, and the flame-proof braid applied over that.

The cost of this silk wrapping became a very important item in the cost of the wire, and the development engineers undertook to find out what could be done to produce a cheaper and equally or more effective wire.

We had at one time used a wire insulated with a rubber compound and a flame-proof braid applied over that.

With the improved process in insulating the rubber-covered wires, it is possible to use a thickness of rubber insulation at the present time which is only about one-half the thickness of the thinnest rubber insulation which it was previously possible to produce.

Starting with this wire, with a thinner rubber covering we found that it was possible to place a coating of sodium [fol. 2508] silicate over the rubber and to apply over that a braid impregnated with the flame proofing salts.

The sodium silicate serves, on account of its water of crystallization, to reduce the temperature of a fire that may start in the wire, and cause the fire to be extinguished.

The wire is more flame proof than the wire which preceded it. It is going into production and use by the associated companies at the present time as rapidly as the manufacture can be extended, and when full production is

reached, which should happen during the current year, the saving to the associated companies over the previous type of wire will be in excess of three hundred thousand dollars a year.

Now during this two-year period we have been conducting a series of—I will be glad to answer any question that you care to ask me, Mr. McConnaughey.

Mr. McConnaughey: I just wondered how you got at this amount of saving; what you based that on.

The Witness: I can tell you that.

Mr. McConnaughey: If you can, make that general to apply to the different figures that you have used.

The Witness: It is an estimate, but it is an estimate with a pretty good basis.

Now take the case of this parallel drop wire that I was talking about. We have manufactured,—had manufactured a large amount of wire, and put it into use. Now we find that it saves, per thousand feet of conductor, .195 of a [fol. 2509] pound, the finished conductor costing 27 cents. That means a saving of 5 cents; the reason being that with parallel drop wire, as against the twisted drop wire, the conductor length is a little shorter.

Now in the insulating material it saves, on account of the less amount of insulating material employed, 2.9 pounds per thousand feet, that unit material costing 15 cents a pound. That amounts to 43 cents.

It saves a pound of cotton yarn.

By Mr. Burr:

Q. Per what?

A. Per thousand feet of wire, which amounts to about 50 cents.

It saves a pound and a quarter per thousand feet of waxes, amounting to about 10 cents.

Q. Still per thousand feet?

A. Per thousand feet. Then as it eliminates labor operations in braiding, twisting, saturating and waxing, those savings amount to about 25 cents per thousand feet, or a total of $1.33 per thousand feet.

Now we have a demand for this wire in the Bell system of five hundred million feet a year, and if the saving were only one dollar instead of $1.33, that would amount to five hundred thousand dollars.

That is the way in which we get at it, so we have a pretty sound basis for our estimate. It is not just a wild guess.

Mr. McConnaughey: That estimate is based on experience over several years?

The Witness: It is based on the last few years, yes, sir.

Mr. Dotson: Did you take into consideration in deter-
[fol. 2510] mining that, the amount of saving on the prospective new development construction that you have planned shall be done?

The Witness: This takes into account just the saving from this cheaper material; that is the associated companies are able to get a new kind of wire which for the current year they can obtain at a price half a million dollars less than they would have paid for the kind of wire that was the best available for that purpose previously.

Mr. Dotson: Is that estimate based upon just a normal development or growth of the telephone business from year to year, or is it made with reference to the extraordinary construction—new construction that is required by reason of your unification of the system throughout the country and the extraordinary growth, I understand, that is necessitated at this time by reason of the growth of many of our cities?

The Witness: Well, sir, it is based upon the expected use of this wire in all the Bell companies in the United States, and it is based on the output of the last two or three years, and I expect that that will be typical of years to come. I shall be very much surprised if there was any very substantial reduction in the amount of that material used. It seems to me that the figures on which this is based are representative normal figures that we can expect will be reached in the years in the future.

Now I think I started, perhaps, to say something about some work that we have been doing in this two-year period on the wire which is used inside of buildings.

[fol. 2511] By Mr. Burr:

Q. I was going to ask you about that next.

A. For connecting the subscribers' telephones around a building with the cable which comes into the building, either underground or aerial. It occurred to us a number of years ago that a saving might be made by using a smaller conductor for that purpose. The doubt about the matter

lay in the fact that these wires have to be pulled through runways in the buildings, and a small wire ordinarily meant less breaking strength for the finished wire.

We undertook to design a smaller wire in which the lay of the braid which covered the so-called rubber insulation was modified so that the cotton in the braid bore a part of the load when the wire was placed under stress.

As a result we were able to get a wire with a smaller conductor that was capable of standing the required breaking load, and during the coming year the experience has been such that we will be able to recommend that to the associated companies, and they will be able to adopt it generally with a saving in the entire Bell system of about $2000 a year in the type of that wire which is used for that purpose and in the amounts to which it is used.

Q. What do you mean by a wire with a smaller conductor; what is the conductor?

A. It is the metal in the center of the insulating material which conveys the telephone current. It is what, if it had no insulation on it at all, would be called the wire, but in common parlance, after it is insulated and braided that is still called the wire.

Mr. Dotson: Just the same as a man is a man with his [fol. 2512] clothes on as well as with his clothes off?

The Witness: Quite right, sir.

By Mr. Burr:

Q. What development, if any, has been made with respect to bridle wire?

A. Well there again we are right at the point of standardizing a bridle wire which will have a No. 20 gauge conductor.

Mr. McConnaughey: Tell us what a bridle wire is.

The Witness: Well it is also an insulated wire, a twisted wire, which is used quite largely on the walls of buildngs outside of the buildings where the telephone wires are conveyed in rings along the building wall from a cable terminal but where they enter the building to go to the subscribers' premises. That again is a rubber-covered twisted pair wire.

For a great many years a wire .040 of an inch in diameter, weighing—I don't remember what it weighs, but it is .040 of an inch in diameter, has been used. Now we are planning to use one that is .032 of an inch in diameter; that is it will be .008 of an inch smaller.

That does not seem like very much, but it covers not only a saving in the conductor itself, but means less insulating material, and it means less braid and wax; so much so that in the amount which is used by all of the associated companies in a year this will lead to a saving of more than Eighty Thousand dollars a year to all the companies of the Bell system.

Mr. Dotson: Now do we understand that these figures you are giving of savings reached are to be spread out over [fol. 2513] the entire United States? You have not allocated them; that does not mean that that is the saving to the Ohio Bell Telephone Company?

The Witness: No, sir; it does not.

By Mr. Burr:

Q. Do these instances to which you have testified represent all of the accomplishments of the Department during the two years?

A. No, sir, they do not. I have so far mentioned examples that have occurred within the section of the department of Development and Research for which I am immediately responsible.

Q. And you have not mentioned all of those, have you?

A. I have not mentioned all of those.

There are savings which have been made in the cost of loading coils. We are practically completing a line of development work which will enable the fuses which are placed between underground and aerial cable and are now mounted in large cable boxes, to be placed in small pots and sealed in compound. That is going to enable a considerable saving to be made.

Now specifically answering your question, there is similar development work with economies going on in the equipment and transmission sections of the Department of Development and Research.

Before leaving this subject of cables it might be interesting to refer to a line of work which has been begun and in which considerable progress has been made since I testified here before; that is relating to the insulating paper with which the conductors of telephone cables are wrapped.

[fol. 2514] The process has always been to manufacture the paper in the form of a continuous tape or strip which is made in rolls. As a matter of fact the paper is rolled into

a large roll of considerable length and then it is cut with sharp knives so that it appears as a disc of several inches in diameter, and perhaps a quarter of an inch in thickness. Then in proper machines that paper tape is spiralled around the conductor and I have several of those here.

It is a very simple matter, by just unwinding this paper, to see how it is twisted around the individual conductors.

Q. You have a sample of that paper-wrapped conductor, have you?

A. I have (producing same).

Mr. Burr: It may be marked for identification Rhodes' Exhibit A-16, and is offered in evidence.

And thereupon the exhibit last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company and is herewith submitted and marked Rhodes' Exhibit A-16.

Mr. Postle: What is the thickness of that wire, Mr. Rhodes?

The Witness: Well that is .020 of an inch in diameter and it weighs about 6½ pounds to the mile.

By Mr. Burr:

Q. Is that a sample of the ordinary telephone wires over which people talk nowadays?

A. Yes, sir. This gauge of wire is being very largely used in the exchange plants at the present time, and it takes [fol. 2515] the place, in a large part of the plant, of a 22-gauge wire, which weighs 10 pounds to the mile, which preceded it, and before that a 19-gauge wire, weighing 20 pounds to the mile.

Q. How was that development brought about?

A. That was due to the continuous development work of the General Staff engineers, working with the engineers of The Western Electric Company which manufactures the cables.

Q. Now proceed, if you please, with your discussion of the change in the insulation of this wire.

A. Now we come down here after a very small paper tape, and it seemed to us in considering the possibility of further economies that we had a somewhat indirect process here. We were making paper and then were rolling it up and we

were slitting it, and we were winding it on a wire, and the thought came to us, "Why couldn't we make paper right on the wire?" So we set up experimental apparatus and we have been doing that, and I also have here, marked as Rhodes' Exhibit A-17, some wire in which the paper is made directly on the wire (producing same).

Mr. Burr: It may be marked for purposes of identification as Rhodes' Exhibit A-17, and we offer it in evidence.

And thereupon the exhibit last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Exhibit A-17.

The Witness: That is made by passing the wire through [fol. 2516] the paper pulp and causing the pulp to be formed right around the conductor. Incidentally, this will allow us to use a less expensive paper than was required in the old process, because, in order to avoid an undue amount of breakage during manufacture, we had to have paper of a certain tensile strength, and by making it in this way a paper of less breaking strength can be employed.

There is before us the prospect of a saving of a million dollars a year in the entire Bell system due to the saving in the cost of paper alone.

Now we do not know whether this can ultimately be applied at the same manufacturing cost, but if it can, there is before us this prospect of saving the entire one million dollars a year. If not, why some of it may be used in increased manufacturing cost; that we do not know, but we are going on with it. We are actually putting out to the associated companies now a very limited amount of cable made in this way and it is working out very satisfactorily in the field.

The process and the machinery are covered by about 20 patents.

I think that is an interesting type of some of the problems that are continually confronting us in the business, with the opportunity of making considerable savings as the result of changes in our practices.

Q. It represents almost a revolution in the matter of insulating the wires, does it not?

A. Yes, I think it does; it is quite a radical change.

[fol. 2517] Mr. McConnaughey: You say there is some uncertainty about the saving in this process?

The Witness: Why, the uncertainty is this; you could never tell what your manufacturing cost is going to be until you get to manufacturing in enormous quantities. Now so far this has been made on experimental machines on a small scale. We hope that when we manufacture it in large quantities the manufacturing cost will be no more than it is with the present methods. It may be less; on the other hand, it may be more. We may run into some unforeseen difficulty. But we have no reason to expect but what ultimately we will be able to realize for the associated companies very large savings from this method of making cable.

And thereupon a recess was taken until 1:30 o'clock P. M. of same day.

[fol. 2518] Afternoon Session

Thursday, February 25, 1926.

And also F. L. RHODES, resuming the stand for further examination in chief, having been heretofore duly sworn, continued his testimony as follows:

Examined by Mr. Burr:

Q. At the close of the morning session, Mr. Rhodes, you had been testifying to some typical instances of new work accomplished by the General Staff of the American Company during the two-year period last past, and you had also mentioned a few instances of typical work on hand. Are there any changes which have taken place with respect to any matters concerning which you testified at the last hearing? You have spoken already of some savings, but what has been the situation with respect to savings generally?

A. Why, the savings have increased. The savings which I mentioned at that time in the entire plant of the Bell system from certain typical cases of completed development work were savings as of December 31, 1921.

Now I have since recomputed those savings as of December 31st, 1923, two years later, and due to the growth of the plant, the savings are larger.

For example, in a case I quoted I mentioned a saving of ten million dollars. Two years later that had become eigh-
[fol. 2519] teen million dollars, and the savings generally have been increased.

In the matter of the application of loading coils, the saving at that time was in the neighborhood of one hundred million dollars, and two years later it is in the vicinity of a hundred twenty million dollars.

Q. What have you to say with respect to the savings on antimony sheath?

A. Well those have increased from six million dollars to upwards of eight million dollars.

Q. In what period?

A. In the period of two years.

Q. Are there any other changes to which you wish to refer in that connection?

A. Only that the work of the Staff is all the time increasing and broadening out. As the business gets larger it becomes advantageous to take up matters that, in its smaller stage, were capable of only small savings, and as the business grows those become matters of greater importance.

In my own section of the department we are doing work now that promises very considerable economy in the way of standardizing and simplifying hand tools used by telephone employees.

We have reduced the number of pairs of pliers that are used in the plant from something like 60 or 70 down to 9, and that means by consolidating the purchasing, tools can be bought at a considerably lower figure by the associated companies.

Q. In other words the work of the General Staff is continuing—going on and is already projected into the future? [fol. 2520] A. Yes, sir; and as far as I can see in looking ahead it must be a continuing proposition.

Mr. Dotson: These reductions you have just mentioned are annual reductions, are they, or savings?

The Witness: No, that is the total saving in first cost of plant.

Mr. McConnaughey: The six million dollars for antimony sheath, is that a total?

The Witness: That is a total since the antimony sheath was put in.

By Mr. Burr:

Q. And it has now been increased to what?

A. To over eight million dollars.

Q. In other words, a two million dollar increase in two years?

A. Yes, sir.

Q. What change, if any, is there today in the figures which you gave for the instrument service in the former testimony?

A. As I remember it at that time, I computed that it would cost The Ohio Bell Telephone Company, if it did not obtain its instruments from the American Company, but provided its own instruments, it would cost a little less than one dollar per station per year, and that figure I should say was unchanged at the present time.

Q. Do you still regard it as necessary for a large operating telephone company, for the proper handling of its business, to put itself in a position to secure to the fullest extent the results of future development and research in the telephone art generally?

A. I do.

Q. Do you know of any place where The Ohio Bell Tele- [fol. 2521] phone Company could secure the benefit of services similar to those received by it from the American Company under the License Contract?

A. I do not.

Q. Could The Ohio Bell Telephone Company, in your judgment, perform those services for itself at a less cost than the amount paid by it to the American Company under the License Contract?

A. What is the payment, may I ask?

Q. The payment is a little over $1,000,000.

A. No; it certainly could not.

Q. Could it secure the services for anything like that amount?

A. No.

Mr. Burr: You may cross-examine, if you care to, at this time.

Mr. McConnaughey: I do not care to close the cross-examination, but I would like to ask a few questions.

Mr. Burr: Certainly.

Cross-examination.

By Mr. McConnaughey:

Q. What is the name of the research laboratories?

A. Bell Telephone Laboratories, Incorporated.

Q. You say that is an incorporation not for profit?

A. It is not for profit. It has a small amount of stock which is owned equally by the Western Electric Company and The American Telephone and Telegraph Company.

Q. Then it is a commercial corporation?

A. It is a commercial corporation. It is financed on bor-
[fol. 2522] rowings, and its work is done at cost, including the cost of the money.

Q. What work does it do?

A. It does the development and research work for the American Company for which the American Company pays it, and then it does a considerably larger amount of work for The Western Electric Company in regard to the engineering of specific equipment and for the development work on apparatus which the Western Electric Company sells outside of the telephone business, and The Western Electric Company pays for that portion of its work.

Q. What is the capitalization of the company?

A. $100,000.

Q. $50,000 owned by the Western Electric Company and $50,000 by The American Telephone & Telegraph Company?

A. Yes, sir.

Q. Under the laws of what state is it organized?

A. Why I think New York, but I am not sure—yes, it is a New York corporation.

Q. And where is it located?

A. At 403 West Street, New York.

Q. That location sounds familiar; is that the previous location of the Laboratories of The American Telephone and Telegraph Company?

A. Yes, sir.

Q. And what plant has it there; how much of a plant is it?

A. Why I do not know the valuation of the plant, but it is a large building, and a very large laboratory equipment.

Q. How many people are employed by it?

A. About 3500.

Q. Now you say that they do the development and research work?

A. Yes, sir, under the direction of the development and
[fol. 2523] research department of The American Company. The process is this: the Development and Research Depart-

ment of the American Company makes a very thorough study of the requirements of the business, and when some new piece of apparatus or new system is required it very carefully studies the needs of the business and determines what requirement should be met by a piece of apparatus.

Then the Laboratories take up the development of a specific piece of apparatus and to meet those conditions, and during the development work there is frequent conference between the engineers of the Development and Research Department of the American Company and the engineers of the Laboratories corporation—frequent conferences, because at the beginning of the development you cannot foresee all of the decisions that have to be met, as the work progresses, but the Development and Research people bring to the Laboratories people the field point of view, the conditions that should be met where every parting of the ways occurs in the development.

Then when the Laboratories complete a piece of apparatus our Development and Research Engineers test it thoroughly to be sure that it meets the conditions, and if it does, they recommend it to the associated Companies of the Bell system.

Q. And this work is financed, as you say, on borrowed money?

A. Yes, sir.

Q. Just how is that borrowing brought about?

A. Why, the Laboratories Corporation borrows from [fol. 2524] either the American Company or The Western Electric Company.

Q. That is, it borrows from the American Company for work that it does for it, and it borrows from The Western Electric Company for work that it does for it?

A. Not necessarily. I think it is according to whether one or the other of those companies has funds which are available for that purpose.

Q. And whichever has work to do pays it?

A. Yes, sir.

Q. And in that way it repays what it borrows?

A. It pays for the work done.

Q. How does it repay the money that it borrows?

A. How does the Laboratories Company repay it, do you mean?

Q. Yes.

A. I do not know that they do; I think that is more or less of a continuing proposition. Of course they may be able to pay it from the payments received.

Q. That is what I am asking you; don't you do that?

A. I do not know how that is done.

Q. When was this company organized?

A. About the first of January, 1925.

Q. And who are its officers?

A. The directors are, from the American Company, J. J. Carty, Dr. F. B. Jewett, Mr. B. Gherardi; those men are vice-presidents of the American Company; Mr. E. B. Craft, who is the executive vice-president of the Laboratories Company, Mr. Dubois, who is the president of The Western Electric Company, Mr. Kilpatrick, who is vice-president of The Western Electric Company, and Mr. O'Dell, who is an officer of The Western Electric Company.

[fol. 2525] Q. There are three directors from each company, and one other?

A. Well there are seven in all.

Q. Well, there are three directors who are officers of The American Company?

A. Yes.

Q. And three I think you named——

A. Three from The Western Electric Company and one who is an officer of the Laboratories Company.

Q. And not a director of either one of the others?

A. No, sir.

Q. Who is the president of the Laboratories Company?

A. Dr. F. B. Jewett.

Q. Who is the odd man?

A. Mr. E. B. Craft, executive vice-president of the Laboratories Company.

Q. You mean by that he is the executive head?

A. Under Dr. Jewett, yes, sir.

Q. You don't know whether the borrowings from the American Company and The Western Electric Company are ever repaid?

A. I do not know how that is, no.

Q. These two companies pay at cost for the work that is done, each for itself, don't they?

A. Yes, sir.

Q. What is done with that money?

A. It goes into the payroll and general expenses of the Laboratories Corporation.

Q. It has no occasion to borrow any money for anything else excepting those purposes, has it?

A. Why it has to have capital and equipment—laboratory equipment.

Q. You know nothing about the financial details of this company?

A. No, sir, I do not, except that it is financed on borrowings.

[fol. 2526] Q. And it makes no profits?

A. It is a non-dividend-paying company.

Q. It is not intended that it shall be?

A. No, sir, it is not intended that it shall be.

Q. But it is intended, I suppose, that its expenses shall be paid and that it shall keep out of debt?

A. Yes.

Q. Excepting to those two companies?

A. I think so.

Q. Now do you know what the par value of this stock is; is it organized with stock at a par value?

A. The par value is $100.

Q. Now in this list of patents which you now say amounts to 6700, that is an increase of something like 2,000 over the list you had in your previous testimony?

A. Yes, sir.

Q. And the number of applications remains just about the same?

A. Just about the same, yes, that is right.

Q. That means, I assume, that some of the things which were applications at that time have now become patents and the process is a continuing one?

A. That is right, sir.

Q. And during the two years there have been issued about 1200 new patents?

A. Yes, sir; the difference is accounted for by some patents existing previous to that time which have been purchased and a license secured under them.

Q. And I suppose there have been some expirations of patents in that time, also?

A. Oh, yes.

Q. I understand that both of these lists of patents include only patents that are still in force; is that correct?

A. Well the list which I submitted today are patents which came out in 1924 and 1925. Those of course are [fol. 2527] live patents. The list that I put in two years ago contains of course a great many patents which have expired in the two years.

Q. Well did your list of two years ago include only the patents that were in force at that time, or did it include all the patents your company had taken from the beginning?

A. No, sir; it included live patents.

Q. That is what I thought.

A. That is right.

Q. All right; now take your Rhodes' Exhibit A-8, "Earth Boring Machines"; that is a new development, is it?

A. Fairly recent, yes, sir.

Q. Well I mean, that is something you had not had before; it is something your department had worked out and made applicable to the telephone business for the first time?

A. I think we had earth boring machines before that time, but this is bringing it up to date with improvements. We used earth boring machines ten years ago, but they were rather crude devices and we have been constantly at work to improve them.

Q. And this is the latest improvement; is that right?

A. Yes, sir.

Q. Well, had you any previous specifications or bulletins on earth boring machines?

A. I rather think we had; I could not say definitely, but I think so.

Q. Your Exhibit A-12, "Transmission Maintenance Practices" states on its face that that replaces—"Section I. D. replaces section I. D. dated November, 1921."

A. Yes.

Q. That means that is a revision of the recommended [fol. 2528] transmission maintenances practices, does it?

A. Yes; it contains improvements over what we had before that.

Q. Can you point out in that exhibit what are the new features that you recommend at that time?

A. No, I could not without comparing it with the old patent.

Q. Specification No. 4404, "Specification for 3-Bolt Guy Clamp Replaces Specification 4180"; can you point out the difference or the improvements or changes?

A. Yes, sir; what we did there, we used larger bolts and we used some elliptical shaped holes and we modified the shapes of the grooves that hold the strand, and those are the principal changes, and they quite largely improve the holding power of the clamp. We had three-bolt clamps before that time, but this was a clamp that had a greater holding power, and so for holding a given load, fewer clamps were required than were required when we had the clamp of the old type.

Q. In your exhibit A-5, which is a list of Development and Research Bulletins, you indicate the title "Guy Anchors Sent out January 11, 1924"?

A. Yes, sir.

Q. Now was that a new bulletin on a new subject, or did that bring the subject of guy anchors up to date?

A. Well the situation there was this; there are available a number of different types of guy anchors which are procurable at different costs.

Now we undertook to find out what was the holding power of these anchors when they were set in the earth, and we installed a considerable number of them; buried these anchors in the ground and then we attached a guy [fol. 2529] strand to them and erected a structure so that we could pull those anchors out of the ground, using a measuring instrument called a dynamometer in the strand, and we pulled those anchors and measured the load and the distance which they crept under the load, because when the load comes on they begin to creep somewhat in the soil. We determined their holding power, and we sent the information giving complete results of those tests to the associated companies.

Now that is very useful to them because when they are considering using different types of anchors at different costs they must know what they will hold and this gave them that information.

Q. And did it recommend certain types of anchors for certain conditions of soil or other plant conditions?

A. Well these were all tested in a moderately sandy soil, and we are now preparing a bulletin based on some tests which were made this last year a short distance out from

Chicago, in soil that is typical of the midwest condition, and we are going to send out a bulletin of the holding power of these anchors in that kind of soil.

That is, it is a continuous attempt to give the engineers for the company in the field the fundamental data on which they can engineer their plants most economically.

Q. When a subject that on research indicates some new idea or some new development, or something to avoid that has been done in the practice heretofore, or anything of [fol. 2530] that kind, you prepare a new bulletin and send it out to the associated companies?

A. That is right. And what we endeavor in general to do is to obtain the kind of information that is useful to all of these companies and to prevent and overcome the necessity of each one having to do this work by themselves.

Q. This Research Corporation, or Laboratories—this Bell Laboratories Incorporated, undertakes no independent research at all, does it?

A. Well, independent in the sense of, it does work which either the American Telegraph and Telephone Company or The Western Electric Company wishes to have done.

Now they have—I do not know whether this would come in line with what you would call independent research or not—but they found that some of the information which they had as to the transmission of electrical currents enabled them to apply those principles by analogy to acoustic properties and enabled them to very much improve the existing type of talking machines, and that work which they did there was paid for by The Western Electric Company and The Western Electric Company have licensed the Victor Talking Machine Company under those patents.

Q. You mean the phonograph company?

A. Yes; but that was a by-product of the work that was done, and that was done and paid for by The Western Electric Company.

Q. I wish you would take the flame-proof wire item as to which you have indicated an estimated saving of $300,000 per year, and tell us how that saving is figured, [fol. 2531] as you did in the case of the cheaper form of drop wire that you testified to this morning.

A. Well, that is a rather simple computation in the saving per thousand conductor feet.

The rubber covered wire costs, for the insulated conductor, $1.85.

The enameled wire costs 64 cents.

But by the use of the rubber insulated wire instead of the enameled wire, we saved $1.68 on silk servings.

Now that amounts to a saving of 47 cents per thousand feet of conductor, or twice that, or 94 cents per thousand feet of pair.

Now the annual demand of the Bell system is 35 million pair feet, and multiplying that by 93 cents per thousand pair feet gives us a saving of approximately $325,000 a year.

Q. Give us your calculation with reference to the wire used inside of buildings as to which you said there was a saving of $200,000 per year.

A. We are using there a 22-gauge conductor instead of a 19-gauge conductor. That means a saving of 50 per cent in the conductor cost, because the wire is one half the area of cross section. That means a saving per thousand feet of twisted pair of 3.9 pounds at 18 cents a pound, or a saving of 70 cents per thousand feet of twisted pair. We save on the insulation 1.85 pounds at 12 cents a pound, which is 22 cents; and we save in cotton yarn a quarter of a pound at 75 cents a pound which is 18 cents.

Now that gives a total of $1.10. But the labor on the 22-gauge wire manufacturing it exceeds that of the labor on [fol. 2532] the 19-gauge wire by about 50 cents. So taking that off from the $1.10 gives us 90 cents.

Now on the basis of an annual demand of 250 million pair feet, that gives us a saving of over $200,000; and likewise with reference to the bridle wires.

Mr. Tolles: Those figures apply to thousand feet each time?

The Witness: Yes, sir.

By Mr. McConnaughey:

Q. And likewise your saving of $80,000 on bridle wire; will you analyze that in the same way?

A. There we save in conductor 3.4 pounds at 18 cents giving 61 cents per thousand feet.

We save 4.9 pounds in insulation at 15 cents, which is 75 cents.

We save .62 of a pound of cotton yarn at 50 cents, which is 32 cents of a saving.

We save .45 of a pound in waxes at 8 cents per pound which gives us 4 cents.

The labor is the same.

That is a total saving of $1.70 which is applied to the annual demand of fifty million pair feet.

Q. Now this earth boring machine, do I understand you to say that the American Company's Department of Development and Research developed that?

A. We developed that in conjunction with an entirely outside concern which is manufacturing apparatus of that kind; that is, our engineers spent a great deal of time with [fol. 2533] the engineers of this company, which I think is out in Wisconsin somewhere.

Q. What is the name of the company?

A. I don't remember that right now. I think it is given in the bulletin.

Q. Is it the Clintonville Four Wheel Drive Company?

A. I should not be surprised.

Q. Where is it located?

A. I think it is in Wisconsin but I am not sure.

Q. Clintonville, Wisconsin?

A. I think so, but I am not sure; that is they worked with those people and told them what the requirements of the system were, and they made designs for an improved form of this boring equipment, and then we tried out an experimental truck which they made, and then we went back to them with further necessity for improvements, and in that way there was finally developed the thing that best met the requirements of the system.

Q. And now are there any peculiar requirements of telephone work that would not apply to any pole-using company that could be worked out in connection with that apparatus?

A. There might be a slight difference but probably not very much so. The point was that there was not on the market anything that was the most suitable thing for telephone use, and it had to be developed.

Q. Were there no earth boring machines on the market before this was developed?

A. Yes, sir; I think there were.

Q. What was developed to adapt that to telephone uses?

A. There were many changes made all the way through; I could not tell you offhand, sir, what they were, but it was the result of a long process of work to get it in the best form.

[fol. 2534] Q. Are there any patents on that device?

A. I think there are, yes, sir, but they are not held by the American Company.

That is illustrative of a branch of the work that we do which is very useful to the associated companies.

For instance, there was not available on the market one of these little portable battery flash lamps for use by instrument installers; that is a convenient sort of lamp. They had to have something to either hitch on their coat pockets or on their cap, and enable them to throw a light on the object on which they were working and use their hands at the same time; something that could be put in any position on a shelf and throw light wherever they wanted it, and we worked with the manufacturers—several manufacturers of those little electric flash lights, setting our requirements forth to them and working with them so they would develop and put on the market something that was most suitable for telephone use. That is a very useful thing to the associated companies to be able to have the best form of appliance, even though it is something that we do not control by patents.

Q. Now this bulletin was put out when; January 5, 1925?

A. What one is that?

Q. The earth boring machines.

A. Well if it bears that date, that is the date it was sent out.

Q. What has been the practice in the making of holes for planting poles heretofore?

A. Done by hand, or else in some cases with a charge of dynamite.

Q. There have not been any machines in use heretofore [fol. 2535] for that purpose?

A. Well, there have been some in use occasionally. There was an earth boring machine that was used when we built the transcontinental line in 1915, but it was a relatively crude device.

Q. Has that come into general use, this machine that was used in 1915?

A. No.

Q. How much of a saving can be effected in the setting of poles by the use of this boring machine?

A. Well, it depends on the conditions. If there is a large, straight-away job, it will amount to a considerable saving. If the job is scattered, with few poles here and there, it would be distinctly less. I could not state any definite figure, because it depends on conditions. But under the right kind of application a tool of that kind will very shortly pay for itself.

Q. I assume that that cannot be used where there is a lot of rock in the soil?

A. No, sir.

Q. Do you know if that apparatus is in use in Ohio, for instance?

A. It is my understanding that they have one of these tools. I do not know whether it is one covered by this bulletin, or its predecessors; I think I am right, in that, am I not, Mr. Kostizky?

Mr. Kositzky: Yes, sir.

Q. Now these Exhibits A-4, A-5, A-6, which are lists of bulletins of various kinds that have been testified to by you, do they purport—I see they are headed "Partial Lists"; Exhibit A-4 is headed "Partial List of General Engineering Circulars"; that indicates that this is not a complete list.

[fol. 2536] A. That is right.

Q. Now is Exhibit A-5 a complete list of Development and Research Bulletins?

A. I think it practically is, yes.

Q. How about the list of specifications?

A. I think that is complete.

Q. What is the practice with reference to applications for patents that are developed by the efforts of the Development and Research Department of the American Telephone and Telegraph Company; who applies for the patent?

A. If it is a patent that applies to instruments, or broadly affects the transmission of speech, it is applied for by the American Company.

If it is a patent which results in an appliance, a switching mechanism or protector or something of that kind, the patent is taken out by the Western Electric Company. But the American Company through an agreement with The

Western Electric Company, controls that patent, and provides that the apparatus that is made under it shall be sold at a price which is not exorbitant, and no royalty is charged the associated companies for the use of those patents.

Q. And the Laboratories Company, Incorporated, does not own any patents itself?

A. It does not, I think, at the present time.

Q. Can you tell us what the purpose of the Bell system was in organizing this Laboratories, Incorporated?

A. Yes; it was to bring about a closer cooperation.

When it was operated by The Western Electric Company and The American Company operated the Department of [fol. 2537] Development and Research, the two organizations did not head up anywhere.

Now it is necessary for them to be in very close cooperation, and it was a matter of administrative convenience to have the same man at the head of the Laboratories and at the head of the Department of Development and Research. He has two assistants under him, Mr. Craft, who is the executive Vice President of the Laboratories Company, and Mr. Calpitts, who is assistant vice-president of the Department of Development and Research.

Now he administers those two organizations through those two men, and the fact that they both report to him enables a better degree of cooperation to be carried out.

Q. Now was this laboratory on West Street in New York previous to the organization of this corporation operated by the Western Electric Company?

A. Yes, sir.

Q. Has there been any change in the License Contract between the American Company and the Ohio Bell Company since your previous testimony?

A. I would not know if there has been, but I do not think there has. I would not know.

Mr. McConnaughey: That is all for the present.

Mr. Burr: That is all I care to ask.

Mr. McConnaughey: I understand Mr. Rhodes may be recalled if we give you sufficient notice?

The Witness: I will do the best I can.

Mr. Burr: Is it understood that Mr. Rhodes may be excused at this time?

Mr. McConnaughey: We are through with him for the

present, Mr. Burr, I do not know whether we will want to [fol. 2538] recall him again or not.

The Witness: Thank you.

Mr. Burr: Call Mr. Allen.

[fol. 2539] And also ARCHIBALD J. ALLEN, called on behalf of The Ohio Bell Telephone Company, having been first duly sworn, testified as follows:

Examined by Mr. Burr:

Q. State your name.

A. Archibald J. Allen.

Q. Have you been sworn?

A. I have.

Q. Are you the Mr. Archibald J. Allen who testified in the so-called Toll Rate Case, A. U. R. P. No. 124, in February, 1924?

A. Yes, sir; I am.

Q. Do you remember the exact date of your testimony?

A. I have in mind February 24th.

Q. I think that is the correct date.

A. Yes.

Mr. Burr: We offer in evidence as a part of the record in the pending case the testimony of Mr. Allen appearing at pages 430 et seq. of the record in the toll rate case, A. U. R. P. No. 124;

We also offer all exhibits offered in connection with Mr. Allen's testimony in that case.

Q. Mr. Allen, has the work of the General Staff of The American Telephone and Telegraph Company, which will be hereinafter referred to as the American Company, as outlined in your testimony during February, 1924, continued since that date without a break?

A. Yes, sir; both the general work of studying problems [fol. 2540] and sending out information which is of value to all the associated companies, and the specific work which is done for individual companies at their request, such as the Ohio Bell Telephone Company, has continued actively during the two-year period from February, 1924, until now.

Q. What was your position with the General Staff of the American Company in February, 1924?

A. Traffic Results Engineer.

Q. What is your position now?

A. I have that same position at the present time.

Q. With the same company?

A. Yes.

Q. What are some of the principal problems which have been handled by the Traffic Engineers of the General Staff during the past two years, and generally?

A. The work of the traffic branch of the General Staff is divided, for convenience of handling the work, into four main branches.

Under the direction of the local traffic engineer the work of studying the types of equipment, quantities of equipment, method of operation and the practices for operating various types of boards, are continually studied and the associated companies advised of the most up-to-date practices in regard to these matters.

Q. Has that work continued during the past two years?

A. It has.

Q. Proceed.

A. A second section of the Traffic Engineering Force of the General Staff is under the direction of the Toll Traffic Engineer.

[fol. 2541] In this section the study of the types of toll equipment, the needs of best providing proper quantities of toll equipment, studies of the best methods for toll operation and the operating practices for best handling the toll traffic, are continually studied and the associated companies are advised through various means, of the best methods for them to use on these toll problems.

A third section of the traffic engineering force is headed up by the general traffic problems engineer, who handles miscellaneous work, but has the two main branches, one consisting in the work of handling the methods of toll fundamental plants and the second covering the questions of toll rate quoting and computing.

A fourth branch of the traffic engineering force of the General Staff consists of the branch which I personally head up, and our work is made up of the study of problems of both local toll office management and studies of the methods of efficiently handling the work in both local and toll offices.

It consists in the work of developing methods of reduc-

ing the work of miscellaneous kinds which are handled in various toll offices, and on various types of switchboard to a unit basis for convenience, both in methods of engineering and in methods of studying the efficiency with which the various offices throughout the system is handled.

Q. What, if you know, has been the effect on the traffic operating expenses of the associated companies based on the changes in methods and changes in equipment provided [fol. 2542] by the General Staff?

A. Many of the items on which the General Staff has worked and developed methods for the associated companies are aimed entirely as matters that will serve as a service improvement.

Others are not of a nature that will lend themselves to a definite valuation, although the general results are for economies in operation.

We have been able to take certain definite phases of the work and evaluate the saving that results in the operation of the Bell system, and those items consisting of matters such as improved switchboard cords, improved toll method, consisting of what has been termed the overlap ringing method; the introduction of the improved multi-coin prepayment coin box; the use of the audible ringing signal, and the use of machine ringing trunks on the B-boards throughout the system, have resulted in an annual saving applied to the amount of work which was handled during the year 1925 of eighteen million dollars.

In my previous testimony covering these same items for the year 1924 the study showed the saving amounting to over sixteen million dollars.

Q. Now these of course are only some of the items which lend themselves to definite evaluation?

A. That is true. There are others which resulted in definite savings to the companies.

I have at this time a chart showing certain effects of the traffic operation throughout the state which I would like to [fol. 2543] introduce.

Mr. Burr: It may be marked for identification as Allen Exhibit A-1, and is offered in evidence.

And thereupon the chart last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone

Company, and is herewith submitted and marked Allen Exhibit A-1.

Q. Before explaining the exhibit however, and referring again to the eighteen million dollars of savings for the year 1925 covered by your previous answer, what companies made and had the benefit of those savings?

A. The associated companies, including The Ohio Bell Telephone Company.

Q. Now, then, if you please, will you explain the chart which has been marked Allen Exhibit A-1?

A. Exhibit A-1, headed "Traffic Expense Per Thousand Traffic Units and Per Station for the Bell System" shows two distinct and different ways of measuring the traffic expense results.

The upper curve, the heavy dark curve, is the traffic expense per thousand traffic units.

Mr. McConnaughey: What is a traffic unit as you have used it here?

The Witness: We have set up a set of quo-efficients which are really multipliers which, applied to the various types of calls, such as the local, multiple flat rate calls, messenger rate ticketed calls, and going on into our toll offices, to the handling of toll calls; we reduce all of those calls to one [fol. 2544] common unit. It is done, as I stated a moment ago, both for convenience in doing our engineering work and for convenience in measuring the efficiency with which our offices are being operated.

This upper curve on Exhibit A-1 shows, starting with the year 1913, the cost of handling one thousand traffic units; that is the cost to the traffic departments of the associated companies.

That is made up largely by approximately 75 per cent in actual payroll wages of the telephone operators. It also contains the expense for the schooling of those operators; the expense for transmission and power used in handling the calls; the janitor expense for keeping the buildings in which the operating work is done, properly cleaned.

This item is the total traffic expense per thousand traffic units handled, and you will see from the curve that in the year 1913 it was running just over $2 per thousand units.

Q. That is where the curve gets up to the line marked "2"?

A. That is right.

Q. In fact it crosses the line.

A. That is right. Now jumping to the year 1925, it will be seen on this same curve that that has gone up to the point where it is a little over the $4.50 mark. Now that shows the actual results.

On the dark line a little further down on the exhibit we have entered the traffic expense per thousand traffic units reduced to the 1913 wage level, as that curve shows what [fol. 2545] the traffic expense per thousand units would have been during the years from 1921 to and including 1925, if the paying of our operating force could have been continued on the same level as it was during 1913, as we realize the change in wage conditions and the change in the value of or purchasing power of a dollar that has happened; and this shows what the cost would be at the present time, wiping out that change in the wage level, indicating that for the year 1925 the traffic cost per thousand traffic units would have been in the neighborhood of $1.70 against $2.08 or thereabouts for the year 1913, or showing what improvements have been made in operating efficiency during that period and what the traffic cost, as I say, would have been, adjusting for only that one item, the change in the actual wage.

Putting the same elements on a little different basis, on the basis of traffic expense per station per month, which is one which is always of interest to people in studying telephone costs, at the bottom of the sheet on the lighter line we have shown for the same period the traffic expense per station per month, starting out in the neighborhood of 65 cents in the year 1913 and running up to in the neighborhood of $1.40 during the year 1925.

Again applying the equalizer only to take care of the difference in the wage, I have shown at the bottom for the years 1921 to 1925 inclusive the cost, the traffic expense per station per month reduced to the 1913 wage level, [fol. 2546] and here again we see that on the traffic expense per station per month where we were running in the neighborhood of 65 to 70 cents in 1913, we are running in the neighborhood of 52 cents per station per month during the year 1925; again showing that eliminating just the one item of the change in the wage level, the traffic expense is run-

ning on a lower basis for the year 1925 than it was in the pre-war period.

Commissioner Poor: What is the significance that it appears that your traffic espense per one thousand traffic units reaches its peak during the summer months?

The Witness: We give practically all our employees a vacation and that vacation comes in generally or largely in the months of July, August and September, and that expense is left in those months so that we have to build up a vacation relief force, and during the months of July, August and September we are paying for one girl who handles the traffic and another girl who is out on a vacation, so that that vacation expense is left in the months instead of being spread through the year; it is left in the actual month when the vacations are given.

Commissioner Poor: I see.

By Mr. Burr:

Q. How, if you know, are the officials of The Ohio Bell Telephone Company informed of improvements in equipment and methods which are developed from time to time and are still being developed by the General Staff?

A. There is a continuous stream of correspondence between the General Staff and the various associated companies, both originating in the associated companies where they have a problem on which they wish assistance and [fol. 2547] write us, or on cases where we have some suggestion which we think will be helpful to them, and we proceed to write letters to individual companies or to all of the companies.

In cases where a problem seems to need treatment beyond what can be properly given by correspondence, either our engineers from the General Staff go to the associated companies—to the territory of the associated companies, and there sit down on the ground and work out with them the problem, or the engineers from the associated companies come into our offices in New York, bringing with them basic data and there we sit down together and work out the problem, and assist the associated companies in developing what is the proper solution of the matter in question.

Have these things been going on during the past two years; that is to say, since the time you last testified?

A. They have, continuously, and in addition there has been of course a very considerable and continuous amount of telephone correspondence between the General Staff and the Traffic Officials and the Associated Company Traffic people.

Q. What other contacts, if you know, are there and have there been during the past two years between the officials of The Ohio Bell Telephone Company and the officials of the American Company?

A. Where some special problem presents itself, where it looks as though any phase of the work would be benefitted by our giving special assistance, we have from time to time given training courses for men who are responsible for managing toll central offices.

[fol. 2548] Four district men of the Ohio company have during the past two years been given six weeks' training in toll offices on management problems by our toll specialists.

Q. Where?

A. Both of these courses were carried on in the City of Philadelphia, although part of the work at the end was done at 195 Broadway. But the majority of the work was handled in the City of Philadelphia.

Q. 195 Broadway in what city?

A. New York City.

Q. Proceed.

A. During that same period three of the division traffic superintendents of the Ohio company have been given four week's special training in the management of the toll problems in their divisions under the direction and guidance of the toll experts of the General Staff.

These courses were carried on partly in Philadelphia and partly in New York City, at 195 Broadway.

During this same period two of the men in the traffic force of the Ohio company were given training courses in force adjustment work.

These courses extended over a period of four weeks and were handled at our General Staff offices in New York City.

Q. Now who gave these courses?

A. The members of the General Staff; the experts on those subjects.

Q. Proceed.

A. During this period from 1920 when the properties

were taken back from the period when they were run by the government, we have been carrying on a very extensive line of work for the improvement of toll service.

[fol. 2549] Q. By "we" whom do you mean?

A. The officials of the General Staff, working with the traffic people of the associated companies.

Q. Proceed.

A. During that period the completion of toll business throughout the system,—and the completion of toll business is probably the best test of how good a job is being done on toll work, because it means two things; it means that the subscribers who have placed toll calls have been put in satisfactory communication with the party they called, and second, it is of vital assistance to the associated companies because the higher percentage of toll calls that are completed, the higher the toll revenue resulting to the associated companies.

During the period from 1920 to date the completion of toll board calls has increased for the Bell system from about 81 per cent to about 90 per cent.

Q. That is to say 81% in the year 1920 to about 90% at the end of 1925.

A. That is the average for the year 1925.

Mr. McConnaughey: What do you mean; that the call is successfully made; that the parties talked?

The Witness: That is exactly right.

Mr. McConnaughey: Where it was only 80 per cent of the attempts to talk that were successful in 1920, it is now 90 per cent that are successful?

A. 90 per cent were successful in 1925.

By Mr. Burr:

Q. Proceed.

A. During this same period for the Ohio Bell Company the results show that the completion has improved from an average of 79 per cent for the year 1920 to approximately [fol. 2550] 90 per cent for the year 1925.

Chairman Marshall: Is that in Columbus?

The Witness: That is for the State.

Mr. McConnaughey: This is toll calls?

The Witness: Yes, sir.

Chairman Marshall: I see.

The Witness: I have a couple of charts showing the trend of that both for the system and for Ohio which I would be glad to produce.

Mr. Dotson: Does that percentage apply to toll service in Ohio during that period?

Mr. Tolles: The last was.

Mr. McConnaughey: Is this 79 and 90 per cent for Ohio, does that apply to the Ohio Bell calls or to the Ohio Bell and American Telephone and Telegraph Company calls in Ohio?

The Witness: It applies to all of the calls which are handled by the Ohio Bell Telephone Company.

By Mr. Burr:

Q. Did you say what the increase in toll revenue of the associated companies amounted to by reason of these improvements?

A. I did not, but we figure the increase in completion from approximately 81 per cent to 90 per cent increases the toll revenue for the associated companies by about fifteen million dollars per year.

Mr. Dotson: In compiling this data did you take into consideration the different number of calls that the Ohio Bell Company handled and the different number of calls [fol. 2551] handled by the American Telephone and Telegraph Company? What I mean is this; did you determine how many calls were handled by the Bell Company—the so-called Ohio Bell calls, and the number of calls handled by the American Telephone and Telegraph Company as its calls?

The Witness: No; these are the calls which were handled by the Ohio company and in some cases they were Ohio Bell calls and other cases they were American Telephone and Telegraph Company calls. They were of course largely Ohio Bell calls.

Mr. Dotson: Were all of them handled by the Ohio Bell?

The Witness: That is right. This is a picture of how good a job the Ohio Bell Company's Traffic Department did in completing calls which it handled.

I have two charts, one showing the per cent of toll board calls completed of the Bell system and one chart showing the percentage of toll board calls completed for the Ohio Bell Telephone Company.

Mr. Burr: The first chart referred to by the witness may be marked for identification as Allen Exhibit A-2, and the last chart referred to by the witness may be marked for purposes of identification as Allen Exhibit A-3, and both Allen Exhibits A-2 and A-3 are offered in evidence.

And thereupon the charts last above referred to are admitted in evidence on behalf of The Ohio Bell Telephone Company and are herewith submitted and marked respectively Allen Exhibits A-2 and A-3.

[fol. 2552] Q. Explain Allen Exhibit A-2, if you please.

A. Allen Exhibit A-2, the percentage of toll board calls completed of the Bell system, shows at the bottom the years from 1920 to 1925, and the curve is spotted to show the conditions monthly for the twelve months of each of those years.

Now one thing that is noticeable on this curve in addition to the decided upward trend and the fact that the average has changed from 81.2% in 1920 to 90% in 1925, is again the summer.

In the years when this work was being taken up actively it was considered impossible to do nearly as good a job through the summer months as through the rest of the year. It was just more or less taken for granted that so many people were away from their telephones and people were out-doors more. We had not, in the associated companies, shown as good results in the summer months as the rest of the year, and in some cases that had been taken as evidence rather than that was a fundamental condition.

In studying that matter we decided that there were very few conditions of that kind that made it impossible to complete the calls. It might be more difficult, but it was not considered impossible. And you will see that this curve, in addition to showing a decidedly upward trend through the years, has shown a decided tendency to wipe out that falling off in the percentage of completion during the summer months.

So that for the year 1925 the summer months are only a couple of points below the conditions for the highest months of the year and only a point or so below the average for [fol. 2553] the year.

Turning now to Exhibit——

Mr. McConnaughey: What was done to bring that about?

The Witness: We called together each year during that period the toll staff supervisory men of the associated companies and during a conference presented all the various points that could be brought up, such as lists of people at Summer resorts, and all the various expedients that we could think of as ways to overcome the falling off in completion, and then periodically set out to the companies all the points that could be raised.

We felt that competition would be very helpful on this, so we asked the companies to send us by telegram, by 10-day periods, during the summer months, the completion in certain typical cities in their territory. We took that data and studied the trend, and sent back the results not only for their own cities, but for other similar cities in the other companies in each case, sending anything that had been developed in the meantime to help the situation.

If it was found that in one city the results were coming along better than the normal conditions our Staff Engineers went there and studied the conditions to find out just what methods were being used to get those results and then those were adapted for use throughout the system and that information was sent out.

It was a continuous application of any of the things that could be found having a bearing on it.

[fol. 2554] Mr. McConnaughey: You spoke of summer lists; do you mean that your exchanges in the Resort Districts kept lists of people who were in those resorts spending the summer?

The Witness: Yes. We had our people get lists in many cases in cottages that were rented on a weekly basis. Monday morning the Chief Operator would call the different cottages and get the names of people who were there so that in case a toll call came in during that week she would be able to complete it, because in many cases they would get a call by name and that being a rented place, it would not appear in the director-, or anything of that kind.

It is typical of the activities that were carried on. We found that we could do quite a little bit by posting lists at our Inward Boards of frequently-called parties, and get the calls through more promptly. That is they used to have cases where someone in Columbus would call a very well-known store in Cleveland, giving us the name of the store, and at the Columbus office we would have to take that to a special operator who would look up the number, and we

found that we could speed those calls up, and everything we could do to speed calls up helps to get completion.

A man puts a call in, he may be going to try to catch a train, or one thing or another. Now if you can get that call completed promptly you don't lose the calling party.

Now we did everything we could to speed up the completion of calls both on the basis that it was better service and on the basis that it was a thing that definitely helped completion.

[fol. 2555] We restudied messenger routes, that is routes of girls taking tickets from one position to another, and we rearranged the position, if necessary.

By Mr. Burr:

Q. Rearranged the position of what?

A. At which the directory work was done.

Q. With what effect, Mr. Allen?

A. Well the natural effect of all of this work I think is covered by the results as shown on Exhibit A-2; the result of a considerable improvement in the service to the customers as represented by the per cent completion, and a considerable improvement to the associated companies in the toll revenues.

Q. What other means, if any, has the American Company employed for supplying information to the associated companies of which the Ohio Bell Company is one?

A. On matters which, as a result of work of the General Staff, we find an answer which is generally useful over a considerable period to the associated companies, circulars,—either traffic circulars if the matter is one which is entirely a traffic matter or a general engineering circular if the matter is one which is the joint work of traffic and development plant engineers, are sent to the associated companies for their guidance in carrying on their work in the field.

Q. Have you some typical samples of those studies or circulars?

A. Yes, I have; I have here a traffic circular on the subject of payroll routine.

Mr. Burr: It may be marked as Allen Exhibit A-4; and is offered in evidence.

[fol. 2556] And thereupon the circular last above referred to is admitted in evidence on behalf of The Ohio Bell Tele-

phone Company, and is herewith submitted and marked Allen Exhibit A-4.

The Witness: It was issued to the associated companies in November, 1924.

Q. Will you explain the exhibit briefly, if you please?

A. In our work with the various associated companies, questions have come up in regard to some efficient routines for carrying on the traffic payroll work. This is important for two principal reasons; one in getting the work done as efficiently as possible with the smallest amount of time of payroll clerks, and secondly to get as satisfactory a job as possible with the fewest number of errors, so that our employees will not be dissatisfied with the results when they are paid.

We find two difficulties; one the case of an employee who does not get the pay that she expects to get, and reports that, which is quickly adjusted; the other being a case of employees who do not get the pay that they expected to get, but say nothing about it, and feel a considerable degree of satisfaction.

Now in our telephone work, where service is such an important item, anything that we can do to keep our people pleased with the surrounding conditions is very much worth while, and these payroll routines are developed to try to improve the conditions on those two important phases of the work.

[fol. 2557] Mr. Dotson: Mr. Allen, what would occasion any situation such as you describe of an employee being dissatisfied with the wages she was getting, if there was an agreement previously made at the beginning of their employment, fixing that compensation; how could such a condition arise?

The Witness: The telephone work is peculiar in many ways. I am glad you asked that question, because I would like to take a moment to explain some of them.

We have to give service in a telephone office during twenty-four hours of the day, and during every day of the year. Now in order to try to equalize as well as we can to our people for some of those peculiar working conditions, such as evening work, Sunday work and Holiday work, and work of that kind, we have found that it is advantageous to pay our girls differentials to offset some of those inconveniences.

To a girl eighteen to twenty years of age, it is a real hardship for her to have to work evenings. Now if we pay her a little differential, a little more per week during the periods when she is working evenings, that, to some extent, offsets the undesirability of that work.

Similarly, if we ask her to work every second Sunday or two Sundays out of three, that is not a desirable thing to ask a girl. Her friends may be going on a picnic, or something like that, and we have found that it is advantageous to not say to a girl, "We will give you $18 a week and you take things as they come; that is sometimes we will make you work evenings and sometimes we will make you work two [fol. 2558] Sundays out of three, and sometimes if you are in the business office we will make you work every other Sunday."

We found that the fairer thing to do and the thing that made the girls more contented with these rather difficult conditions was to pay such differentials as would, as well as they could, offset them.

That means that a girl in the telephone work does not get eighteen dollars a week in her pay envelope this week, and eighteen dollars next week and eighteen dollars next week, but she gets paid on a basic rate of possibly, say, $16 or $17 or whatever it may be, plus a differential if she is working certain evening hours, plus a differential for the week that she works Sunday.

So that the payroll routine for paying telephone operators is a considerably more complicated problem than in factories or work of that kind where it is a straight case of so much per week with a definite deduction for time lost.

In addition to our deductions for time lost, we have to take care of all these conditions which have been put in to make the work and the pay seem as equitable as possible to our force.

Mr. Dotson: How long have you had a plan in operation of the kind you just described?

The Witness: These instructions were issued, as I say, in November, 1924, because we found that a number of the companies felt that their payroll routine set-up was not cov- [fol. 2559] ering in the best way, all the possibilities.

We experimented on this work. The Ohio Company was one of the places where we worked and furnished them with preliminary instructions of this kind, so that I think the

Ohio Bell Telephone Company had the benefit of this routine possibly six months before the circular was finally issued.

We were carrying on the work, the experimental work similarly in one or two of the other companies, and as a result of that work,—and in this case it happened to be partly at the request of the Ohio Bell Telephone Company that we carried on that work,—as a result we found that we had something of value to all the companies and supplied them with that information in this traffic circular.

Mr. Dotson: Now it was the adjustment that you effected by this circular of the proper compensation for the different kinds of service rendered and the different conditions, that was taken care of through this circular, insofar as the interest of the employee was concerned. I believe you stated that you had two purposes; one was efficiency of service and the other was to meet the conditions that concerned the employee.

The Witness: That is correct. We feel that this circular accomplishes those two results better than the routines which any of the associated companies had previous to that date.

Mr. McConnaughey: Is this routine being followed now by all the companies?

The Witness: I could not say whether it is being followed by all the companies or not. I know that it is in definite use [fol. 2560] in Ohio, and by most of the companies; I could not say whether all of them have it in use or not.

By Mr. Burr:

Q. Have you any further example of instructions issued by the General Staff to The Ohio Bell Company?

A. Yes, sir, I have prepared an exhibit including taffic circular number 212 and general engineering circular number 1575. These two circulars cover, the one, toll line engineering practices, and the other, traffic engineering of interoffice trunks, and we felt that these were so closely related that in order to fit them into the records I would put them in one binder and make them as one exhibit.

Mr. Burr: The exhibit may be marked as Allen Exhibit A-5, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone

Company, and is herewith submitted and marked Allen Exhibit A-5.

The Witness: This exhibit I think will explain a matter that might be of interest to the Commission in regard to how these matters are handled.

You will notice that on traffic circular number 212 it is shown as replacing traffic circular number 146, and modifying traffic circular number 162.

Now, you will also notice that practically all of these circulars are issued in loose leaf form.

Now we have found that in these matters a great many [fol. 2561] of them need continuous study, and to be of real value to the associated companies they must be kept up-to-date.

Now we follow this practice. We issue our circulars practically all of them in loose leaf form. If some minor change is necessary, affecting a few pages, we replace those pages and send them to the companies to be inserted in their files.

If the subject is restudied to the point where practically the whole subject takes on a new attitude, then we send a complete new circular replacing the old.

In this case here we have a combination of one circular which completely replaces an old one, and of another circular which replaces one old circular and modifies another circular.

So that I think that will give possibly a little more definite picture of why in some cases we will have circulars that show replacing; and where it is a replacement it means that it is a very considerable change from anything that has been sent out before; a matter which could not well be handled by the replacement of just certain pages.

Q. State, if you can, some of the specific improvements in equipment and methods made available to the Ohio company during the past two years; and by "made available" I mean made available by the General Staff of the American Company.

A. One item of very considerable importance to the associated companies and to the subscribers of the associated companies has been the development of a new toll operating [fol. 2562] method, known as the combined recording and line method. This method has been under trial in the field

for the past something over a year, and we have now arrived at the point where we can definitely recommend the extension of that method throughout the associated companies, with a definite feeling that by the use of that toll method we will reduce the interval from the placing of a toll call by subscribers to the completion of that toll call on the average by practically two minutes.

This will mean not only decidedly better service to the subscribers, but we feel that there will be possibly some economies in the operation, although at the present time we have not figured on any economies but are looking at this as a development entirely as a service improvement.

This method is already in use on some of the traffic in Ohio. The City of Toledo is now handling a considerable percentage of its toll traffic on this new method, and the results indicate a very decided improvement in speed of the completion of toll calls in that city.

Mr. McConnaughey: Will you tell us what that is?

The Witness: The method consists in rearranging our toll equipment so that the operator who takes the call from the subscriber proceeds immediately with the completion and work out on the toll line.

Previously the best operating practice known in the telephone companies has been the separation of work into a recording team of operators who recorded calls going to [fol. 2563] points in the toll field, and those calls were then sent to specialized operators who handled calls from a given city, such as Columbus, to some other point, such as Toledo, or to Cleveland, or a special point.

We have found that by the proposed method we can get proper speed or answer to the subscribers who are wishing to place toll calls and at the same time have the operators proceed at once with the completion of those calls. At the present time, while this is being introduced it is being used on all of the calls that go to points on direct toll circuits with that city.

And we have further developments in the method whereby we feel that we can extend that to points reached over a second circuit or where there is one switch involved.

There is a great deal of development work yet to be done, and the application in our large cities can only be made by very complete revision of the toll equipment.

Very fortunately we have carried the development to the

point where we were able to do a very special job of engineering for the Ohio Bell Company, so that their new toll board which has just been specified to go into the new building in Cleveland, will be suitable for the use of these new improved methods. That was work which was put on a ratio basis and our specialists on this work devoted a large amount of time solving the problems to avoid the difficulties that would come from engineering an important board such as the new Cleveland toll board on the old method and then have a better method available before the board was [fol. 2564] installed.

Another development of importance applying to the local work which has been made available to the associated companies these past two years is in the use of what has been termed straightforward trunking. This method applies in cities having a considerable amount of trunked traffic and having a considerable number of offices; and the studies indicate that when this method is completely installed in the cities where it is applicable there will be an annual saving to the associated companies of over $2,500,000 per year. That is an amount of saving over and above the annual charge on the necessary equipment, in order to make this new method workable in those cities.

Now I have with me a circular giving not only the instructions for engineering the straight forward trunking method in the cities where it will apply, but giving the attached bulletin prepared by the Development and Research people, which shows the enormous number of special circuits that had to be developed in order to make a system of this kind applicable throughout the associated companies cities.

Mr. Burr: It may be marked for identification as Allen Exhibit A-6, and is offered in evidence.

And thereupon the document last above referred to is admitted in evidence on behalf of The Ohio Bell Telephone Company, and is herewith submitted and marked Allen Exhibit A-6.

[fol. 2565] Q. Will you explain the method of straightforward trunking covered by the exhibit you have already referred to?

A. This is a method which has been developed to take the place of the present call circuit method in our large multi-office cities.

One of the very difficult problems in giving accurate service in the large cities has been the confusion and difficulties of understanding trunk assignments, and the passing of numbers between the A and B operators in these large cities.

With the straightforward trunking method the A operator on receiving a call will plug into a trunk which will be connected to the operating side of the B operator automatically and the B operator will then listen to the A operator pass the number; a tone being given back to the A operator, indicating that the B operator is available.

The B operator then takes the cord which, by light signals, she knows to be the one on which this call is being completed; picks up that cord and simply says "Right", and plugs into the multiple jack of the called subscriber.

By that means we avoid the confusion and give each operator really the individual access to the terminating B operator.

It is of real value to all of the force, but of vital value to the newer girls, who have always had difficulty in completing calls under the call circuit method, where it was necessary for the operator in answering a subscriber to repeat the number to her; then to put her finger on a little [fol. 2566] call circuit button, and pass that number to another operator; the other operator then told her what trunk between two offices that call would be completed on.

The operator at the terminating end, upon hearing a number such as 4321, had to say some number such as "four-dash-six", the trunk number.

Then taking this trunk, four-dash-six, which she had assigned, she had to keep in her mind the number passed to her by the originating operator and put it in the proper number.

You can see difficulties there where two or three operators would be in on the red of one operator and some operator might, being a new girl, misunderstand what trunk she was supposed to take the call on, or the operator at the completing office end might, in passing the trunk number back, mix up the number of the called party.

Now we have, by this new method, cleared that all out and made it a straightforward method; it goes straight forward.

The A operator, on getting the call, plugs into a jack in

front of her. That selects the B operator for her and she, on hearing the buzz indicating that the B operator is available to take a call, passes the number to that B operator. The B operator does not have any of the chances for confusion because her only duty is to take up this plug and plug it into the number that was passed.

Q. In other words, the B operator does not select the trunk?

A. That is right.

[fol. 2567] Q. And does not pass the word back to the A operator that an operator is available and the number of that available trunk?

A. By this method we expect to get not only, as I have stated, over $2,500,000 of saving for the associated companies, but we expect to get improved service. We expect that the errors on the calls that go from one office to another will become less as that method is introduced.

Q. Would it be proper to say that under the straightforward trunking the A operator selects the trunk instead of the B operator?

A. That is correct.

Q. What have you to say with respect to the continuing character of the services similar to those which you have been describing in the future? You have already described what has been done in the past. What do you say as to the continuance of those services in the future?

A. We see continuous need for those activities. Many of these such as the two I have just mentioned have got many possibilities beyond the ones that are now evident, and there is a great deal of work to be done in extending the scope of those methods. And the same is true on practically every phase of our work.

Not only is it of vital importance that the work be kept up to date and that such of the matters as are now covered by routine be revised as conditions change, making it necessary, but there seems to be a continual opening up of new fields where we feel that we can do work that will be very helpful and profitable to the companies both in service im-

[fol. 2568] provement and in matters of economies of operation.

Q. Is the volume of work diminishing or increasing?

A. It is continually increasing.

Q. Is the volume of the service to the associated companies increasing or decreasing?

A. I believe that it is also continuously increasing.

Mr. Burr: Do you care to cross-examine at this time?

Mr. McConnaughey: I would like to ask one or two questions.

Cross-examination.

By Mr. McConnaughey:

Q. How did you figure this saving of $2,500,000 on straightforward trunking?

A. In that case we have made detailed studies for a considerable number of cities where we have actually engineered the offices of those cities for straightforward trunking, and compared the operating costs under the conditions after straightforward trunking has been put in, with that previously.

We have in cities such as Richmond, Virginia, where we made one of our first trial installations of the straightforward method, and in New York City, where in the Lexington office and in the Spring office where we made trial installations of this method, we have as the result of these trials established general data as to the number of calls which various operators can handle under the present methods and under the straightforward methods. And in [fol. 2569] Exhibit 6, which I put in under the traffic engineering notes, we quoted to the associated companies there the possible loads in calls; that is the possible number of calls which operators can handle in other cities after the straightforward trunking is installed. Then it is a mere case of taking the number of calls to be handled and dividing that by the present loads—the present number of calls to be handled under the present methods and divide it by the number of calls which will be handled after the straightforward is installed, and that shows you the number of people that you need with the present methods, and with the straightforward method, the difference being the saving which will result from the installation of the straightforward.

Q. The saving, then, is in the number of operators necessary to handle a given load?

A. Yes, and that is to first offset the annual charges on the necessary equipment, and as I have stated in my previous statement that this $2,500,000 is the saving in operators'

wages which will result in excess of the amount required to pay the annual charges on the additional equipment.

Q. Is that saving the amount that you have figured for the cities that you have engineered as the cities where it can be applied, or how do you get that figure?

A. That figure is the result of a saving in twenty-six cities where we have made rather detailed studies, and cities which are the type of cities where this method of operation seems to have application.

Q. Are those all the cities where it can be applied?

[fol. 2570] A. Up to the present time we doubt if there is economies or any large service saving in cities beyond this list, although we are still working on the method and definitely hope to make some further improvements and changes which will make it prove in ~~in~~ smaller cities.

Q. What determines the availability of the method in a given city?

A. The largest saving is at the B boards and the largest saving is on the B positions which handle incoming calls for more than one office.

Now if we have a city say that only has three offices it is obvious that we will have practically no positions in any office in that city that are handling calls from more than two offices. On the other hand, when you get into cities such as Cleveland or the larger cities where we have a dozen or more offices, then we have the traffic coming from one side of the city and going to the other, resulting in a number of positions where we have traffic on a B position coming from more than one local office. And the biggest saving on the straightforward is on those positions.

Now whether a city has positions of that kind or not is one of the very controlling elements in whether there are any considerable economies in installing the method in those cities.

Further than that, the question of service becomes much more of an element in those larger cities where we have complicated call circuit conditions and where there is danger of calls going to wrong offices and matters of that kind. So that both from an economical side and from a service [fol. 2571] side, the straightforward has a more ready application in the larger cities; although we have some studied under way now which we hope will make it applicable to a considerably wider range of cities, and if we do, the saving of course will be increased.

Q. I understand there are some changes in equipment necessary to put this into effect?

A. That is correct.

Q. What are the cities that you have engineered and found the system applicable?

A. New York, Chicago, Philadelphia, Pittsburgh, Boston, Cleveland, St. Louis, Indianapolis, Detroit, San Francisco, Los Angeles, Milwaukee, Oakland, Seattle, Portland, Oregon, Newark, New Jersey, Jersey City, Albany, Buffalo, Baltimore, Washington, Atlanta, Toledo,—and Toledo seems to be getting all of those good things—Cincinnati, Minneapolis and Omaha.

Q. Has the method been adopted in all of those cities?

A. The engineering work has been done in practically all those cities, and actual work is going ahead in those cities towards the installing of or making the necessary changes.

Q. Is the method in use in any of those cities yet, or are the changes just now being made?

A. They are being made; that is the method is in use to a considerable extent in Boston. It is in use in a number of these cities on the tandem part of the work and the equipment is being changed to extend it to the local trunking work in those cities.

Q. Does it call for the installation of new equipment or a change of existing equipment?

A. Well it requires additional relays applicated on the [fol. 2572] present existing circuits.

Mr. Dotson: Then it does not result in the retirement of any existing equipment?

The Witness: No, sir, but it does in some cases relieve existing equipment to take further growth. That is, if we have a switchboard and we put in a new method that requires less operators, that obviously relieves certain equipment. Now in general that equipment will be available to take additional growth and there might be some cases where that would relieve enough equipment so that it would be economical to take out certain positions rather than leave them there and pay the annual charges until growth filled up the board. But in general, it is a relief that simply releases certain positions and making it unnecessary to install additional positions to take care of growth for the next year or two.